# THE CMS GUIDE TO MANAGEMENT PLANNING

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**Conservation Management System Consortium**

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**Cover photo:** View over Morfa Harlech NNR with Snowdonia in the background. Data from Morfa Harlech was used to develop the first CMS prototype it was also the first site where CMS was used. The photo provided the inspiration for the CMS logo. © Mike Alexander

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# ACKNOWLEDGEMENTS

So many people have helped with the production of this planning guide that I am bound to forget someone, so if anyone is missing please forgive me.

I must begin with a very special thank you to Tom Hellawell. Where I have developed the planning guide, Tom has developed the practice of planning. It was back in 1990 that Tom developed the first quantified and measurable conservation objectives; today we would not consider doing otherwise.

The development of this planning system, and my confidence in the end product, is entirely dependent on thorough and rigorous testing. In this context, in addition to Tom Hellawell, I must mention David Wheeler and Doug Oliver, and thank them for having the patience to write and rewrite plans, until, at last, we were satisfied with the results.

Progress with developing the planning process, and in particular the habitat objectives, was guided by John Rodwell. Working with John is always a pleasure as well as being extremely productive.

I am also particularly indebted to the following for their essential contributions: Dennis Bellamy, Adam Cole-King, Andrew Peterken, Mike McCabe and David Mitchel.

And finally a very special thank you to my wife Rosanne who has edited the various versions of this document so many times that I am certain that she knows most of it by heart. She has also had to tolerate, for many years, my impatience and bad temper on the frequent occasions when problems seemed insoluble.

Mike Alexander

2005

## FORWARD

There are few things in conservation management that follow clear patterns or hierarchies. In particular, guidelines for managers change with research results, and the roles of managers change with their education, creativity, and political leadership. In this sense, despite its long history, wildlife management is still in the early stages of professional development. As a British idea it may be traced to an upsurge of sentiment after the Second World War that the world should be made a better place. Regarding nature, it was the botanist Arthur Tansley who pleaded for organised nature conservation on the double ground of scientific value and beauty. He had advanced the concept of the ecosystem in 1935, and a number of key ideas of relevance to nature conservation stem from this. In the immediate post-war years, he hoped for an 'Ecological Research Council', and a 'National Wildlife Service'. In this context, the CMS planning guide can be traced to the formation of the British Nature Conservancy Council, and its great survey of habitats and species, the Nature Conservation Review, published in 1977. The first guidelines for managing this national resource was a pro forma dealing with the description of the site, the goals of management, and a prescriptive section, in which the objectives of management were to be interpreted in a practical manner. Central to the latter section were lists of codified jobs to help wardens abide by best practice.

As warden of Skomer Island NNR in the 1970s Mike Alexander always strived to do better at a time when, as one Chief Warden of the NCC put it to me, "We now have the land, but our feet are of clay". It was Mike's dissatisfaction with this first conservation management system that led to the CMS planning guide, and indeed to the Conservation Management System Consortium itself. Its major shortcoming was that it lacked a business philosophy to track value for the inputs of effort and resources.

The Conservation Management System Partnership coalesced around Mike Alexander, Tim Reed and James Perrins in the 1980s, an important episode in British conservation that has yet to be documented. Its early work was biased towards the business end of conservation management. This took shape as a software tool for scheduling action plans and recording the outcomes of on-site operations against smart objectives. In terms of its widespread uptake, the CMS software is now, de facto, the British national operations standard. However, with respect to planning, there is still variability between organisations, not so much with regard to concepts, but with respect to emphasis. Management is still an imprecise science, the lack of precision being contributed by the inherent variability of ecosystems and limitations of resources. More uncertainty about what we are planning for comes from the ongoing debate about human-centred and life-centred theories of environmental ethics. This planning guide covers the major concepts and values currently in vogue to formulate conservation policies and practices. Their common purpose is to transform what would otherwise be situations of confrontation between humans and non-humans into practical means of mutual accommodation. Variations in planning between organisations continue to emerge because there is room for intuitive thinking.

The advantage of using Mike Alexander's planning guide is that it has a long record of incorporating the latest thinking about how best to accommodate people with species and habitats. In this respect it has co-evolved with a powerful database for recording, implementing and reporting on business-like management plans. This is growing rapidly as an evidence-based library of best practice for exchanging practical know how.

**Professor Dennis Bellamy**

Chair CMS Consortium

# CMS & THE CONSERVATION MANAGEMENT CONSORTIUM

**CMS**

The Conservation Management System has grown steadily since its inception, and now provides a unique approach to management planning, which is used to support nature conservation and countryside management throughout the UK and in many other countries worldwide.

The strength of the CMS management-planning format lies in the fact that it was created specifically to meet the needs of site managers. Throughout its development it has continued to respond to the requirements of its users in order to provide a system that facilitates the work of the individual while, at the same time, satisfying the wider needs of large organisations.

In the early 1980s, Mike Alexander (then an NCC Warden) recognised the importance of structured planning in managing his sites, but the sophisticated data management necessary for that level of planning was not currently available. He began to develop a planning and reporting system using standard project codes and titles. Although this system was still paper based, it marked the beginnings of CMS. In 1989, Mike teamed up with James Perrins, a biologist and computer expert with a background in nature conservation, and together they produced a prototype computerised version of CMS.

In 1990, supported by a grant from British Petroleum, a number of leading UK nature conservation organisations came together to develop and trial CMS. A substantial grant from the EU followed a year later allowing continued development of the software.

In 1997, the first Windows version of the CMS software was launched in response to an increasing awareness of the benefits to be gained from computerised data management. The most recent version, CMS 7, is another step forward, bringing together all sections of the management plan and clarifying the links between the aspirations of the plan and the work carried out on the ground. User friendliness, speed of use, reporting and the ability to customise the appearance of the database have all been improved, as CMS continues to adapt to users' needs.

This standardised approach to data management has allowed information to be shared within and between organisations. The exchange of data and expertise provides long-term benefits for nature conservation and countryside management, and remains one of the core principles of CMS

**The CMS Consortium**

In 1993, the Countryside Management System Partnership was formed to provide, maintain, develop and promote CMS, and to support all aspects of management planning in order to promote good conservation management practices. Now known as the Conservation Management System Consortium, its membership comprises Brecknock Wildlife Trust, Countryside Council for Wales, Environment & Heritage Service (Northern Ireland), English Nature, Essex County Council, Exmoor National Park Authority, Gwent Wildlife Trust, National Trust, Radnorshire Wildlife Trust, Royal Society for the Protection of Birds, Wildlife Trust of South and West Wales, and Wildfowl & Wetlands Trust. While individual members of the Consortium have changed, the basic aims of 1993 remain, and the Consortium has gone from strength to strength.

Until January 2004, much of the Consortium's work was delivered by the CMS Support Unit. In November 2003, the Consortium signed a commercial agreement with exeGesIS SDM Ltd. This allowed exeGesIS to undertake some of the work of the Consortium, taking over the licensing, support, development and marketing of the CMS software and website from 5 April 2004, subject to the terms of the agreement. This work is now done in close liaison with the CMS Management Team, acting as representatives of CMS Consortium.

# CONTENTS

# CHAPTER 1 GENERAL INTRODUCTION

> Wildlife management is not a science. Wildlife managers apply the science of biology. They use methods of science. But management is an art. Science is any body of organised, tested, and accepted knowledge; or it is research: the process of finding, testing, organising, and communicating knowledge. As an art wildlife management is the application of knowledge to achieve goals. Wildlife management is primarily application of biology, especially ecology. Wildlife managers use scientific methods to obtain information about populations and habitats. They require the objectivity of scientists. They also require manual and communication skills achieved through experience. They use judgement and form compromises especially when decisions must be based on limited information. In selecting goals, they compare and judge values. Science does not deal in compromises and value judgements.
> J.A.Bailey (1982), Wildlife Society Bulletin, 10, 363-369

The planning approach described in this document should more than meet the requirements of most nature conservation and other countryside sites. This is a guide to planning. Treat it as such. Use those areas that are relevant to your site. Omit anything that is irrelevant and include additional sections where required.

## Consultation and stakeholder involvement

Stakeholder or community interests can have considerable implications for site management, and place significant obligations on site managers. Public interest at all levels must be taken into account. The planner must recognise that other people may have many different, and sometimes opposing, interests in the site. It is essential that these interests, wherever possible, are taken into account. While it is essential that we recognise the need for an inclusive approach in all situations, it is also important that we understand that scale of the need will vary from site to site. There are sites which, for example, are so remote or small that they generate very little, if any, interest from stakeholders. On the other hand, some sites cover huge areas, have resident human populations and a wide range of stakeholders who are dependent on the site for their living. Thus, the level of consultation and stakeholder involvement in planning and management must be relevant to local circumstances. As with all aspects of planning, one size does not fit all.

Consultation and negotiation should be about presenting ideas or proposals for discussion and seeking views about specific issues. A structured planning process should generate ideas and proposals. Unfocused discussion is rarely conclusive and can be counterproductive. Before any consultation, we must know what we are trying to achieve and define the areas not open to negotiation. For issues open to discussion, we must offer a range of well-considered options.

In order to safeguard wildlife successfully, conservation managers need to adopt a flexible approach that will allow them to respond to the legitimate interests of others, to adapt to the ever-changing political climate, to accommodate uncertain and variable resources, and to survive the vagaries of the natural world.

## Further reading

There are many guides and publications that deal with stakeholder involvement and consultation. The two most recent and useful are:

Guidelines for Management Planning of Protected Areas, Lee Thomas and Julie Middleton IUCN 2003.

Management planning guidance - Management planning for protected areas - a guide for practitioners & their bosses, Eurosite 2004

## Small is beautiful

The production of a large, elaborate and expensive plan will not be possible, and certainly not justifiable, for many conservation sites. The size of a plan and, perhaps more importantly, the resource made available for its production, must be in proportion to the complexity of the site and also to the total resource available for the safeguard and/or management of the site. Thus, for small, uncomplicated sites, short, concise plans will suffice. A plan should be as large as the site requires and no larger.

Even where there may be a long-term intention to prepare a full plan for a site, the process can, and perhaps should, begin as a brief outline or minimal statement. As further information becomes available the plan may grow.

Plans should, whenever possible, be prepared for an entire site. However, for very large and complicated sites it may be necessary to divide the site into recognisable management units or zones. These units may be based, for example, on tenure, site status, habitat distribution, tourism or public use. Specific plans can be written for each unit, but must conform to an overview plan. If possible, the overview should be written in advance of the unit plans.

## The functions of management planning

The following are some of the most obvious and important functions of management planning:

**1. To identify the objectives of site management**

This is perhaps the single most important and obvious function of the planning process. It is essential that the objectives, or purposes, of management are identified. In other words, we must understand what it is that we are trying to achieve.

**2. To identify the factors which affect, or may affect, the features**

Our ability to achieve conservation objectives will always be influenced, to some extent, by positive or negative factors. Factors include anything that may influence the features in the past, present or future.

**3. To resolve any conflicts**

On most sites, there will be some conflict of interest and difficulty in identifying priorities. It is essential that the planning process is recognised as the forum for resolving conflicts.

**4. To identify and define the monitoring and surveillance requirements**

If a plan does not identify the monitoring and surveillance requirements, then it cannot be regarded as an operational plan. Monitoring must be recognised as an integral part of management and planning.

**5. To identify and describe the management required to achieve the objectives**

Having established that a plan identifies the purpose of management, it follows that it must also identify and describe the process. In most cases, where a habitat or species requires safeguarding, some action, i.e. management, will be necessary.

**6. To maintain continuity of effective management**

Continuity of effective management and monitoring is essential. Management must be continually adapted to meet a wide range of varying factors. So, although management will change as circumstances require, the purpose of management should remain more or less constant.

**7. To obtain resources**

Management planning must identify and quantify the resources required to manage a site. This information can then be used to support and justify bids for resources.

**8. To enable communication within and between sites and organisations**

Communication is essential within organisations and also between organisations and individuals. Management plans are about communication. They are a means of presenting information in a structured and accessible format that can inform others about the site and what we are trying to achieve, and also about what management we are applying. Planning and management for nature conservation is largely dependent on the availability of information. We must be aware of management techniques and procedures developed or improved elsewhere that are appropriate on our sites, and in return share our experiences with others.

**9. To demonstrate that management is effective and efficient**

We must always be in a position to demonstrate that we are making the best use of resources. It is also essential that we recognise the need for accountability.

# CHAPTER 2 MANAGEMENT PLANNING – THE PROCEDURE

The concept of a management plan that grows as information becomes available is important. The plan format offered in this guide is somewhat ideal, and represents the amount of information and discussion that could be a long-term target for many site plans. Begin by producing a plan that meets, as far as resources allow, the requirements of the site and your organisation and no more. Any shortfall of information should be recorded and the incomplete or absent sections dealt with at a later date. Some sections may be considered non-essential at the early stage. In time, as further information is collected and resources become available, the plan can grow and may eventually meet all your requirements.

## Preparation

The preparation of all but the simplest plans should be undertaken as a team effort. No one individual will possess sufficient expertise in all the areas that require consideration. It is, however, essential that one person has complete responsibility for the production of the plan. This role should be seen as editorial, and the most appropriate person for this position is usually the site manager. The author of the plan should have a good knowledge of the site, and understand the practical aspects of management and the interactions between different interests and features.

Unfortunately, it is not always possible for the site managers to set aside sufficient time for planning, and, consequently, organisations often resort to using consultants to write plans. Although this may be far from ideal, it is better to have a plan written by a consultant than no plan at all, but only if the site managers have been fully involved and consulted. A technique developed by the CMS Partnership requires that the consultant prepare the plan through interrogating the site managers and obtaining their approval of each section. Managers will rarely accept the imposition of a plan prepared by others inexperienced in the management of the site unless they have been fully involved in the planning process.

## Presentation

The need for a dynamic or adaptable approach to planning will be discussed. It follows that if a process is dynamic and subject to review and change, there can be little purpose in producing permanent documentation. Many organisations have produced extravagantly bound management plans, documents so precious as a result of the effort and cost of production that site managers are very reluctant to modify them. These documents are usually left on a shelf to gather dust.

The best possible means of holding and presenting a plan is as a computer document. Ideally, there should be no need to print out the document. In reality, though, many people usually prefer reading text on paper.

The contents of the plan should, whenever possible, follow a standard format which has been approved at organisational level. It is important that the value of standardisation within organisations is recognised. A standardised approach provides a framework for consistent presentation and comparison between sites. However, it is important that individuals are not constrained by the format. There may be cases when it is necessary to include additional sections, and there will be cases where sections should be omitted.

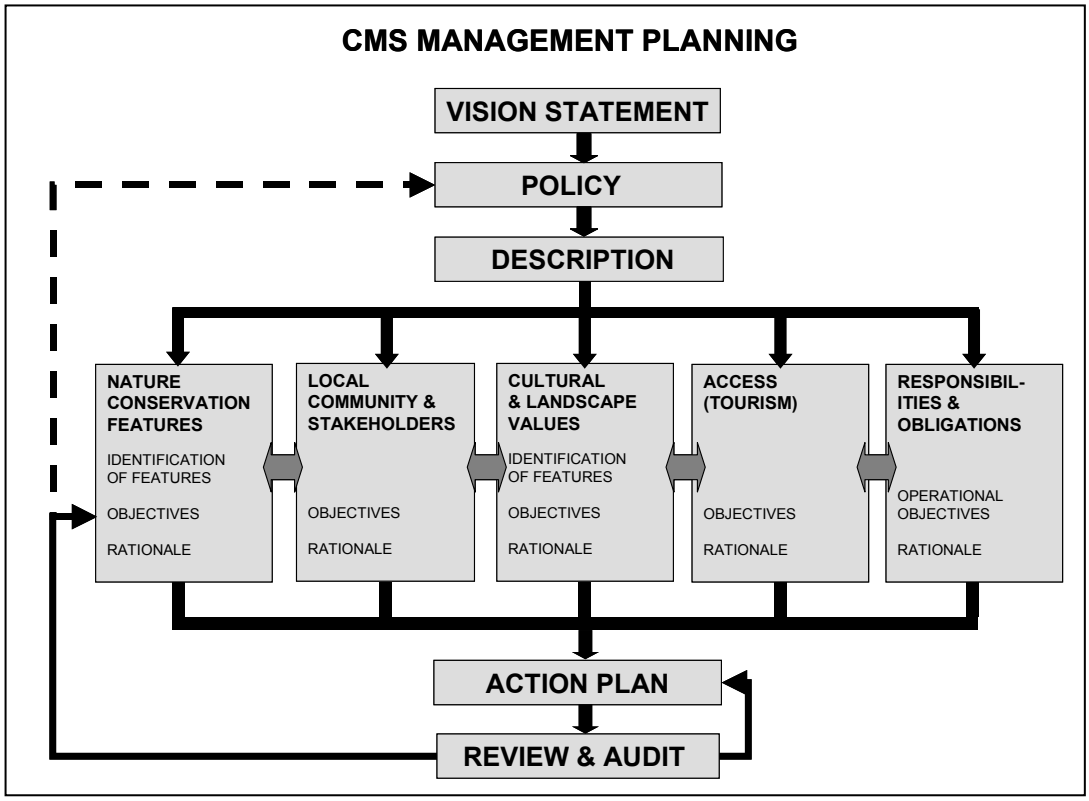
Whenever appropriate, maps should be used to supplement the text. These may be included within the individual sections or placed at the end of a printed plan along with any appendices.

The date when each section is completed should be recorded, along with the name of the author. It is also helpful to provide a reference list at the end of individual sections.

While the format should be standard, the production of a management plan is not necessarily a sequential process. While working on one section we often become aware of information that should be placed in another section. The best advice, if you are using a standard word processor, is to prepare all the files that you will need in advance and place information in the files as the need arises. If you use the CMS software, this facility has been pre-prepared; in other words, all the spaces that you will need to hold your plan have been created in advance.

# CHAPTER 3 PLAN OVERVIEW

This chapter is included in order to provide an overview of the entire process. I strongly recommend that anyone embarking on writing a management plan using this planning guide should read this overview before beginning.




## THE MAIN SECTIONS

### 1. Vision statement

The plan begins with a vision statement to provide readers with a simple overview, in words, pictures and maps, to convey an impression, or vision, of the conditions that management is intended to achieve for a site. In other words, this is what the site will look like when we have met our objectives.

### 2. Policy Statements

One of the most important, if not the most important, sections in any plan is the policy statement. Plans must be written to reflect the policies of the organisation responsible for the management of a site. This section identifies all the policies relevant to the site, including any legal or other obligations.

### 3. Description

As little time as absolutely necessary should be devoted to this section, and only relevant information should be included.

The description is fundamentally a collation exercise. All relevant data are presented under various standard headings. It is important that

information is concise and easy to assimilate. One of the functions of the description is to identify any shortfall in data.

## 4. Features of Interest

The main purpose of this section is to provide a list of the important features and to confirm their status. Management planning for nature conservation requires a focus. In theory, it might be possible to write a single, all-encompassing objective for an entire site. In practice, this would be an unwieldy statement, so complex that it is unlikely we would be able to recognise, or deal with, the detail.

The approach adopted in this planning system is to identify a range of the most important features and use these as a focus for the entire plan.

In addition to nature conservation features, sites often contain a range of additional features, including geological, archaeological, cultural and religious features.

Other features, or points of focus, for planning include landscape & wilderness values, relationship with stakeholders, access and tourism, interpretation, and responsibilities and obligations

## 5. Action plan - work programmes & various reports

A rationale section is included for each feature and operational objective. The purpose of the rationale is to consider, and present in outline, the management that will be required to meet the various objectives. This is followed by the completion of a project plan for each individual item of work outlined in the rationale. A project plan should provide enough information for anyone required to undertake the project to do so without further guidance.

Site managers will require a range of work programmes and other reports. Usually, a programme of work, at least for the key personnel, is required. This will contain details of the various tasks or projects to be completed, the individual responsible for the work, when the work should be completed and where.

## 6. Project recording

It is essential that records are maintained for all monitoring, management activities, significant events and surveys. The maintenance of records is expensive and can put considerable demands on resources. It is therefore important that recording is carried out as an integral part of the planning process, and not on a serendipitous basis.

## 7. Review

### Annual review

The main purpose of the annual review is to ensure that the site is being managed in accordance with the approved management plan.

**Long-term review**
Plans require a major review at predetermined intervals. The main functions of this review are:

- To ensure that the status of the recognised features on the site is accurately reported.

- To assess whether or not the plan will maintain or restore the features.

- To ensure that any recent developments of management techniques have been recognised.

- To ensure that a review of features is completed. This is to ensure that any additional features, missed or considered unimportant at the time of writing the original plan, are now recognised and dealt with appropriately.

## 8. Audit

In addition to, or as a replacement for, the long-term review, nature reserves and protected areas should be audited at specified intervals. Audit should be considered an essential component of the planning process.

### The functions of audit

- To assess whether or not a site is being managed to the standard required by the organisation or department responsible.

- To confirm, as far as possible, that management is effective and efficient.

# CHAPTER 4 SOME PLANNING PRINCIPLES

## The precautionary principle as applied to environmental management.

There are a dozen or more definitions of the precautionary principle. All say more or less the same thing. These are a few examples:

- Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. (Rio Declaration 1992)

- When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. (Rachel's Environment & Health Weekly 1998)

**The precautionary principle is controversial. There are concerns expressed by environmentalists and industrialists, such as that from the USA Reason magazine:**

> "The latest environmentalist concept 'the precautionary principle' seeks to stop innovation before it happens".

However, most commentators appear to support the principle and many make the point that it is simple common sense. In essence, we do not take risks with our environment. The principle may be more generally relevant to governments and politicians, but it has significant implications for conservation management and planning. The following are some of the more obvious implications:

- Unless we have conclusive evidence to demonstrate that conservation features are at favourable conservation status we should assume that they are unfavourable.

- If the status of a feature is unknown we should assume that it is unfavourable.

- Factors that affect, or may affect, conservation features should not be dismissed until we are confident that they are not a threat.

- We should take steps to control threats (factors) even when there is insufficient scientific evidence to support our concern.

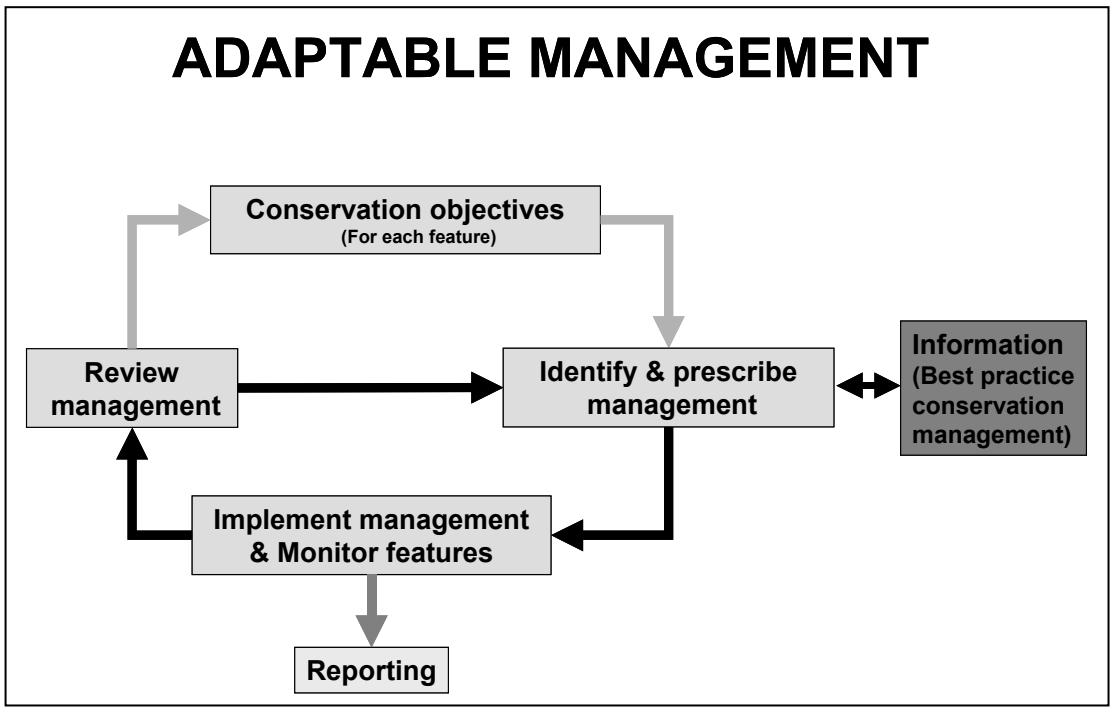
- We must not assume that management will inevitably achieve the desired results. Management can only be considered appropriate when we have conclusive evidence to demonstrate that it is delivering the required outcomes.

- When considering the carrying capacity of a site for any human use, we must provide conclusive evidence to demonstrate that the activity will not be a threat to the conservation features. This would include identifying any management required to remove, or at least minimise, any potential impact.

## Adaptable management

This must not be confused with the USA concept of adaptive management.

Conservation managers must adopt a flexible approach to management planning. This adaptable approach allows site management to respond to the legitimate interests of others, adapt to the ever-changing political and socio-economic climate, accommodate uncertain and variable resources, and, most importantly, respond to the unpredictability of the natural world.




### The adaptable process as incorporated in this planning process:

**1.** A decision is made about what we want. These are the objectives for each feature.

**2.** Appropriate management is identified and implemented. This takes account of the current status of the feature, and is based on direct management experience and evidence gained from elsewhere.

**3.** The features are monitored in order to determine whether the objectives are being met. Where objectives are not being met, the management of the site is reviewed and, if necessary, modified.

**4.** Reporting is an important by-product of the planning process.

**5.** The cycle is repeated at appropriate intervals.

**6.** Occasionally, it may be necessary to modify the objectives. There are two main reasons for this. Firstly, over time, our perception of what is valuable in conservation terms may change. Secondly, our understanding of, features, the way they behave and, most

significantly, the relationship between the condition of a feature and the factors that influence it, will develop.

**This adaptable approach enables conservation managers to:**

- Learn through experience
- Take account of, and respond to, the varying factors that affect the features
- Continually develop or refine management processes
- Demonstrate whether or not management is appropriate

## Nature conservation inputs, outputs, & outcomes

Recently there has been a move towards using inputs, outputs and outcomes as a means of describing the process of managing protected sites.

| | | |
|---|---|---|
| **INPUTS** | **=** | **RESOURCES** |
| **OUTPUTS** | **=** | **POLICIES, MANAGEMENT PLANS, MANAGEMENT** |
| **OUTCOMES** | **=** | **CONDITION OF HABITATS AND SPECIES** |

The definitions are quite straightforward:

**Inputs** are the resources that we provide for site management, for example, finance, staff and equipment.

**Outputs** are the consequential by-products of management or the management process. For example, policies are developed for the various management activities, management plans are prepared, interpretation is provided, a management infrastructure is developed and maintained, and internal and external boundaries are constructed. Often, outputs are used as a means of assessing whether management is appropriate. Managers will claim that they have successfully managed their sites because they have achieved a number of outputs. This can be very misleading since it is possible to carry out a wide range of management activities and still fail to safeguard the conservation features. One of the worst mistakes that anyone engaged in nature conservation management can make is to claim that a feature is being successfully protected when, in reality, it is not.

**Outcomes** are the end point of conservation management. They are the condition that we require of the features (habitats and species) we are aiming to protect. Whereas inputs and outputs are usually measured, the measurement of conservation outcomes has, until recently, rarely been attempted. This is partly because, until recently, managers have not recognised the need, but also because there has been so little guidance

available. As is the case with adaptable management, we must be able to determine, and quantify, the conditions that we require of the conservation features. If we cannot do this, it will be impossible to measure those conditions and, consequently, to judge whether we have achieved required conservation outcomes.

The only means of judging whether or not inputs and outputs are adequate is by considering the outcomes of management. When we are able to do this, and only then, will we be in a position to determine when management is appropriate.

We have come to realise that we must measure conservation outcomes as well as outputs. Both measurements are essential if we are to come to any meaningful conclusions about management effectiveness and our ability to safeguard wildlife. This planning process provides a methodology for measuring both outputs and outcomes.

## CHAPTER 5 TABLE OF CONTENTS OF THE MANAGEMENT PLAN

*Important: The plan format offered in this guide is somewhat ideal, and represents the amount of information and discussion that could be a long-term target for many site plans. Begin by producing a plan that meets, as far as resources allow, the requirements of the site and your organisation and no more.*

**6 LANDSCAPE / WILDERNESS VALUES**

- 6.1 Evaluation
- 6.2 Objective for landscape / Wilderness values
  - *6.2.1 Management objective*
  - *6.2.2 Performance indicators and monitoring*
- 6.3 Landscape status and rationale
  - *6.3.1 Status*
  - *6.3.2 Rationale*
  - *6.3.3 Management projects*

**7 STAKEHOLDERS**

- 7.1 Evaluation
- 7.2 Objective for stakeholders
  - 7.2.1 Management objective
  - 7.2.2 Performance indicators and monitoring
- 7.3 Status and rationale
  - *7.3.1 Status*
  - *7.3.2 Rationale*
  - *7.3.3 Management projects*

**8 ACCESS / TOURISM**

- 8.1 Evaluation
- 8.2 Objective for Access / Tourism
  - *8.2.1 Management objective*
  - *8.2.2 Performance indicators and monitoring*
- 8.3 Status and rationale
  - *8.3.1 Status*
  - *8.3.2 Rationale*
  - *8.3.3 Management projects*

**9 INTERPRETATION**

- 9.1 Evaluation
- 9.2 Site specific interpretation policy
- 9.3 Performance indicators & monitoring

**10 OPERATIONAL OBJECTIVES**

- 10.1 Operational objectives
- 10.2 Rationale
- 10.3 Management projects

**11 ACTION PLAN**

- 11.1 Work programmes & Reports

**12 PROJECT RECORDING**

**13 REVIEW**

- 13.1 Annual Review
- 13.2 Long term review

**14 AUDIT**

- 14.1 Functions of Audit
- 14.2 Timing
- 14.3 Personnel
- 14.4 Procedure
- 14.5 Reporting
- 14.6 Main section of the audit report.

# CHAPTER 6 THE CONTENTS OF THE MANAGEMENT PLAN

*Please note: The numbering changes at this point. The new numbering system will closely reflect the structure of a completed management plan.*

## 1 VISION STATEMENT / EXECUTIVE SUMMARY

### 1.1 Vision statement

This section provides a simple overview in words, pictures and maps to convey an impression or vision of the conditions that management is intending to achieve for a site.

This is not an essential section, but it can be useful, particularly on sites that require considerable restoration or re-creation, to convey an impression, or vision, of the site in the condition that will be the end product of management. In other words, it portrays the condition that should exist when all the objectives have been met. It may also be possible to describe the various transitional stages that can be expected on route towards meeting the management objectives. The section can be presented as a block of text, but one of the best examples that I have seen was for a land reclamation site in Wales. The planners prepared a simple sketch map depicting the site in its desired condition. The map contained illustrations of the various habitats with key species accompanied by concise text written in plain language. It quickly conveyed the purpose of management on the site to the widest possible audience. Any approach that relies on graphics or mixed media is more likely to convey a vision than plain text. In a later section it will be necessary to provide a vision for each of the features of interest; these will provide the basis of the site vision.

### 1.2 Executive summary

The purpose of the summary is to provide a concise overview of the entire plan. The summary plan should contain all the key elements of the full plan. In general, the summary should not be tackled until all other sections have been completed. However, there are exceptions. Sometimes there is an advantage to be gained in making some of the most important decisions and obtaining outline approval before proceeding with the detail of the plan. In these cases, the summary should contain the elements that will usually require decisions and/or approval at organisational level.

## 2 POLICY STATEMENTS

It is not possible to over-emphasise the importance of this section. Plans must be written to reflect the policies of the organisation responsible for the management of a site. This can also include any legal, or other, obligations that may arise from legislation or the status of a site, which are recognised by the managing organisation.

Policies can exist at several different levels. For example, an organisation may have a general policy directed at protecting wildlife, more specific policies relating to the protection of birds, or policies that target particular named species.

The nature of organisational policies often means that they are expressed in rather general or vague terms. They may also be implicit rather than appearing in written form. Take this section as an opportunity to identify all the policies of your organisation that may be relevant to the site. Set them out with explanatory notes and obtain early approval for your interpretation of them. Do this before proceeding beyond preparing the description for your plan. This is important, since it is these policies that provide the guidance necessary for the completion of a management plan, particularly the identification of management objectives.

For large or complicated sites, especially high-profile public sites, you should consider using a series of sub headings in this section. I recommend the following:

- General policies
- Nature conservation policies
- Landscape policies
- Access and tourism policies
- Interpretation policies

# 3 GENERAL DESCRIPTION

**DESCRIPTION – Introduction**

More time has been wasted on descriptions than all the other sections of the plan put together. It is not a particularly demanding exercise, but, unfortunately, the preparation of the description often becomes a displacement activity. It is possible to devote days or weeks to this in order to avoid tackling the subsequent sections of the plan. Please do not fall into this trap.

The full description detailed in this section will not be appropriate for many sites. Do not produce a full description for small or uncomplicated sites, or if resources for planning are in short supply. Ensure that those preparing the plan are aware of what information is available. Use the various headings as prompts to guide the process of preparing a simple summary description. Make sure that it contains enough information for readers to understand the later sections in the plan.

The description is fundamentally a collation exercise. All relevant data are located and arranged under various standard headings. This section does not call for the generation of data and need not be dependent on the completion of surveys or research. In fact, one of the functions of the section is to identify any shortfall in data. It is important that information is concise and easy to assimilate. The order in which the headings are organised is of no particular significance and, initially, the headings should be regarded as having equal value. For sites that require a full description, include all sections and subsections, even when the section appears irrelevant. For example, on a coastal site where the solid geology is totally obscured by a great depth of blown sand, there would be little point in producing a detailed geological description. However, if the section was omitted readers may wrongly assume that the planner had forgotten to include, or even consider, geology. A simple statement, "Geology is not believed to be a significant consideration in this plan", would remove any ambiguity.

It is very unlikely that any individual would be able to complete all the sections without assistance. The author should consider his/her position as editorial, and seek help and guidance from others. For example, there is no point tackling the climate section when a full climatological description of the site can be bought more cheaply than the raw meteorological data. Often, specialists will already have prepared accurate, detailed descriptions of site features. Where these are reasonably concise, there is little point in rewriting them for the plan, but they must obviously be checked for accuracy and relevance. Where a description is acceptable, it should be incorporated in the plan and attributed to the original author. If a report is too large to be incorporated in a plan, a summary should be prepared. In these cases, provide a reference including the location of the original document.

In cases where the planner believes that there is insufficient information available, the shortfall must be recorded and, if possible, appropriate surveys or research should be indicated. These may be identified using the appropriate project codes (see later sections for details on the use of codes). The identification of, and justification for, future surveys and research is an important function of the management planning process.

Sites and populations of species are dynamic and continually changing in response to natural and man-induced trends. The description must accommodate these changes. The various sections will require review and update as additional information becomes available. Each addition or update must be appended to the original, dated and initialled.

**Finally, spend as little time on the description as possible and only include relevant information.**

## 3.1 General Information

### 3.1.1 Location & site boundaries

This section describes the geographical position of the site, along with main access routes. A map will usually suffice. Provide any additional information that may help users locate or gain access to the site. If a national grid reference system or latitude and longitude are used, give a reference for the centre of the site or, alternatively, an entrance point or points. Always state what the reference relates to, for example, the centre of the site, a car park or gateway.

### 3.1.2 Tenure

It is essential that the individuals preparing the plan have a full understanding of land tenure and legal status of the site. Tenure documents are usually over-complex and written in a style that makes them difficult to understand. The role of the planner is to translate the document into everyday language. It is important that the translated documents are not on any account used for legal purposes. The first sentences in all cases should be: "This is not a legal document. Please refer to the original tenure documents before taking any decision or any action which may have legal implications." The location of all legal documents should be noted. It is useful to provide tenure data in tabular form.

The following headings may be used:

- Owners and occupiers (stakeholders can be used as an alternative to include all individuals with some interest in the site)
- Type of holding (e.g. lease, purchase, agreement)
- Date of acquisition or agreement
- Length of lease/agreement
- Total area
- The area of individual leases, holdings etc.
- Legal rights of access
- Reservations - include conditions of an agreement, lease, tenancy etc
- Common rights
- Bylaws
- Agreed management policy

**Note:** Where tenure is complicated by the presence of more than one owner/occupier, land holding or status, each separate area should be individually described. Include a map showing the different areas of tenure, rights of way etc.

### 3.1.3 Management / organisational infrastructure

Provide a brief outline of the structure, organisation and staff responsible for managing the site. This can include details of staff responsibilities. This statement should be in respect of present staffing levels. Later sections in the plan may identify a need to revise the staffing structure on a site.

### 3.1.4 Site infrastructure

Describe all significant buildings and any other man-made structures. Comment on their purpose, if any, their condition, and note any associated benefits or problems. For example describe visitor centres, workshops, roads, bridges, footpath systems etc. Maps showing locations, routes etc. may be the best way of presenting this section.

### 3.1.5 Map coverage

Record any relevant contemporary maps and any useful historic maps. Include maps showing topography, geology, soil, land use, vegetation etc. Give the date, scale and location of the maps. Identify any future need for map preparation/purchase. There is little or no purpose in attempting to locate every map ever produced which covers the site. Many historical maps are very inaccurate and have little more than curiosity value. The degree to which the site is believed to have changed or developed in recent times should influence the amount of effort put into locating historical maps. For example, on dynamic coastal sites early maps, particularly admiralty charts, can provide useful information on past trends. This may help us to understand the processes responsible for change.

### 3.1.6 Photographic coverage

The record of photographic coverage should contain sections on both aerial and ground photographs. It should include reference to contemporary and historic photographs. Where individual photographs are of special interest they should be listed. Any reference to an individual photograph should give a location, and comment on the contents and quality. It is often sufficient to make general comments on the availability, or otherwise, of photographs. For example:

> "The site records contain over 500 colour transparencies depicting a wide range of views, species and activities. The collection has not been sorted or catalogued, and many of the photographs are of poor quality. It is essential, given the need to maintain a photographic record and also to provide material for talks and displays etc, that the collection is improved."

In cases where photographic coverage is believed to be inadequate, prepare a brief justification for further searches/acquisition. Historical photographs are an ideal source of information on past land use and management. The key to future management often lies in the past. By gaining an insight into past management practices we are better able to manage the sites for the future. But be cautious; photographs can sometimes be misleading.

## 3.2 Zones

Protected areas may be divided into zones to meet a wide variety of management purposes. Zones must be delineated and described, and the basis or justification for their selection presented.

The positioning of this sub-section in the plan is not easy. Zones are used to describe management actions and to guide or control a very wide range of activities. In order to develop meaningful zones, an analysis, based on information derived from the objectives and associated rationales, is required. However, a problem arises because the objectives cannot, and must not, be completed until much later in the plan.

This leaves the planner with two alternatives: either prepare a provisional zone map and be ready to amend it at a later stage, or wait until the objectives and rationales have been completed before attempting anything. It is important that the zone map is included at this early stage in the plan. One of the key functions of the zonation map is to help describe the site, and particularly the management activities.

It is often very difficult to describe, or even consider, the management of large or complicated sites unless they are divided into a series of zones. Zones may be selected and defined for a variety of different reasons. Some of the most usual are areas of different land tenure, physically discrete or isolated areas, areas where there are differing approaches to management, and areas of different habitat. There are a few basic rules that should be applied when establishing zones:

A full and detailed rationale will be required to explain the basis for establishing the zones.

A concise description of the functions and/or restrictions applied within each zone must be prepared and included in this section.

A map showing the zones must be prepared and included in this section of the management plan.

Zone boundaries must be easily recognisable and clearly identifiable on the ground. Physical features such as rivers, walls or roads form the best boundaries. Boundaries based on habitats must be identified with permanent markers since communities are often dynamic and liable to change in area.

On large, uniform sites, or areas of homogeneous habitat, fixed markers may be the only answer.

A common, and useful, approach is to mark map grid intersections on the ground. Zones should be identified with a unique and, if possible, meaningful code. In most cases, a simple numerical code will be quite adequate.

## 3.3 Environmental information

This chapter contains the physical and biological information.

### 3.3.1 Physical

In common with all other sections in the description, these need only be completed if the information has relevance to site management or the planning process. It is important, however, that all sections are considered and that, even when the section appears irrelevant, an entry to that effect is made. The following sections should be considered:

- Climate
- Hydrology
- Geology
- Geomorphology / landform
- Soils

In some cases, it may be useful to combine geology and geomorphology, and in others there may be value in adding topography.

### 3.3.2 Biological

Three subsections can be included:

- Habitats/communities,
- Flora,
- Fauna.

The flora and fauna subsections can be divided into separate groups: vascular plants, bryophytes, fungi, lichens, mammals, birds, reptiles, amphibians, fish and invertebrates.

Although many managers recognise a need to complete, and maintain, full species lists for sites, these lists have no place in the main body of the management plan. They may be included in the appendices, but species lists can be misleading. The size or accuracy of a list will often be a reflection of the effort that has been put into recording on the site. In many situations, a great diversity of species is an indication of the health or general good condition of the site, for example, a virgin forest. In other circumstances, such diversity may be an indication that a site is in extremely poor condition. For example, disturbed raised bogs, where the peat has been cut, will usually contain many more species than a pristine, or uncut, bog.

It is important that all notable or endangered species, along with any other species that may have specific management requirements, are recorded. This must include pest and alien invasive species. It is particularly important that all species given specific legal status or protection are noted.

Record any significant surveys, or any other projects that may have relevance to the data presented in this section. It is also essential, as with all other sections in the description, that any shortfall of data is recorded. It may be that species recording is so incomplete that subsequent management decisions will be difficult or impossible. It is useful, even at this stage, to identify any future projects that may be required to obtain further data. However, this is not the appropriate place to define priorities.

The habitat/communities subsection is used to describe the habitats and plant communities, using a standard approach whenever possible. Clearly, the most appropriate way of achieving this is by producing a map. Where a standard classification system has been used to identify communities, it will be sufficient to record the system by name and give a location for any documentation that provides methodology, along with a description of the individual communities. If a non-standard approach is used, a description of methodology and communities should be included in the plan, either in this section or possibly the appendices.

## 3.4 Cultural

This section deals with the impact of man and the human values which have been placed on the site.

### 3.4.1 Archaeology

Record the presence of any archaeological or historical remains on the site, along with any implications for management. Ancient monuments are often legally protected, and the site manager may be responsible for ensuring their safeguard. Even when there may be no need to provide active management, it is essential that other management operations do not in any way threaten these remains. It is important, therefore, that all recorded remains, particularly all legally protected monuments, are noted and shown on a map whenever possible. Where nothing is known, this may indicate the need for future surveys.

Archaeological remains, along with a recorded history of past land use, can provide valuable guidance for future management. This is particularly important when dealing with semi-natural or artificial habitats.

### 3.4.2 Past land use

An appreciation of past land use will often provide the planner with an essential guide to understanding the current condition of the features on a site. This is particularly important when dealing with damaged or semi-natural features. Although of academic interest, there is generally little purpose in looking too far in the past. Consider the period that is most likely to have affected the present condition.

### 3.4.3 Present land use

Record present land use, but exclude management for nature conservation. Record all aspects of land use, i.e. forestry, agriculture, tourism, water

extraction, education etc. Note the impact that any of these activities are known to have on the site. For sites where public access, recreational use, education etc. is important, this section should be used to provide a description of existing use. This should be sufficient to meet the needs of developing an interpretation section for the plan, if necessary.

### 3.4.4 Past management for nature conservation

This should be the easiest section to complete for all managed sites. Unfortunately, records have usually not been adequately maintained and, consequently, this essential section is often difficult, or impossible, to write. When information is available, it is best presented using the site project codes and titles as headings. Full information on the selection and use of project codes is given later in this guide.

### 3.4.5 Past status of the site

This section provides a brief historic review of the interest shown in the site, usually by scientists, but could also include naturalists, artists, writers and others. This should be followed by details of any past legal conservation status. This information is effectively an assessment or evaluation of the site made at an earlier time by others. It will often indicate the prime reasons for site acquisition, and can prepare the way for the main discussion in the evaluation.

**Beware:** Sites and values change with time.

### 3.4.6 Present legal status of the site

This section presents the conservation status of the site, for example, National Nature Reserve, National Park, Ramsar Site, World Heritage Site. The status may be a consequence of domestic or international designations. Also include details of the status of the general area within which the site is located. This should be followed by an outline of any constraints or obligations resulting from the site status. The status of a site is sometimes regarded as a *factor*, i.e. something that is known to influence, or that may influence, the features of a site. In these cases, the status of the site should be discussed in the *Factors* section of the plan.

## 3.5 People – stakeholders, local communities etc.

This section is used to describe the current (at time of plan preparation) public use and interest in the site. Public is taken to mean anyone with an interest in the site, and will include local people, tourists and special interest groups.

For sites where public interest and interaction is important, include very brief summaries in this section. At a later stage in the planning process these elements will be dealt with in significantly greater detail. However, for very small sites, or sites where relationships with stakeholders, tourism, etc. are not a pressing issue and do not merit close attention, all relevant information should be included at this stage.

### 3.5.1 Local communities and stakeholders

Local community and stakeholder interests will have considerable implications for site management and will place significant obligations on the site manager. Stakeholder interest covers a broad spectrum, with the interests of the local individual or community at one extreme and organised national, or even international, interest at the opposite extreme. Stakeholder

interest, at all levels, must be taken into account. The planner must recognise that other people may have many different, and sometimes opposing, interests in the site. It is essential that these interests are safeguarded wherever possible. There may be a justifiable need for compromise, providing, of course, that the prime objectives of management are not placed in jeopardy. Sites are never isolated from their surroundings. It is usually only possible to obtain their safeguard through co-operation with others.

**Outline description of stakeholders and local communities**

Describe the stakeholders and local community. Use the definition given in the introduction, 'any individual group or community living within the influence of the protected area and any individual, group or community likely to influence the management of the protected area'. Provide a map whenever this will help. Describe any significant divisions within the community and note any sensitivities that may arise. Be extremely careful. Plans are often used as consultative documents and should not be regarded as confidential.

**Interaction with local communities**

Include a full description of all current and any relevant past interaction with people. This will include legal and illegal activities, along with a brief description of how these activities impact on the protected area.

What advantages, if any, do stakeholders gain from the presence of the protected area, for example, employment, opportunities arising from tourism, protection from destructive wildlife, and the provision of support services?

What benefits does the protected area gain from stakeholders, for example, a source of labour, intelligence on illegal activities, specialist local skills, and volunteers?

**Past and current measures to improve relationships**

Describe all initiatives taken in an attempt to improve relationships with stakeholders, successful or otherwise.

### 3.5.2 Access and tourism

Describe the current tourism and recreational use of the site. This section would cover everything from tourism and quiet enjoyment of the site to the use of off-road vehicles and other potentially damaging activities. Differentiate between those activities that should be encouraged, those that may be tolerated and those that are unacceptable. If facilities are provided, describe them. For very small site where access and tourism is not a significant issue, a simple statement under a broad heading may be appropriate. However, for any site where access or tourism is important, include at least the following sections.

**Past and current provision**

This is a descriptive section and should only include statements of fact. It should not include any consideration of potential. This will be dealt with in a later section. Any shortfall in data on visitors should be identified, and appropriate projects identified to make up the shortfall.

**Past and current use**

Use the following list of headings for completing this section, but note that it is neither exclusive nor exhaustive. Use maps where these will help to convey the information. This could include maps to show the area surrounding the site, provision by others in the area, where visitors come from etc.

- **How many visitors use the site?**
  This could include the annual total number of visitors, the average number or a range over a specified number of years, trends up or down over a specified period, and the proportional use of different parts of the site/access points etc.

- **How do they get to the site and gain access within the site?**
  Describe modes of transport, departure points, availability of public transport, and include any other information about their journey. Move on to describe how visitors get around when on the site, for example on foot, in their own vehicle, whether they are accompanied etc.

- **What are the visitor characteristics?**
  This could include why they come, where they come from, how often they come, how long they stay, whether they come as individuals or in formal or informal groups.

- **Why do visitors come to the site?**
  What are their interests and expectations?

- **What are the current visit characteristics?**
  This can include, for example, time spent at the site, timing and seasonality.

**Current visitor infrastructure**

This should contain a description of the current visitor facilities. Use an annotated map if it will be helpful. Provide quantitative and qualitative information as far as possible.

**Current and past concessions**

This will include any information on current concessions, if there are any. This is particularly important if the concession period extends beyond the implementation date of this plan.

### 3.5.3 Interpretation provisions

Describe the current interpretation use and facilities, who uses or benefits from them, and the general purpose or focus of present interpretation. For example, are facilities intended for the interpretation of the site alone or nature conservation in general? Comment on the interest shown by the public at all levels. It may also be appropriate to describe earlier attempts, whether successful or otherwise. Quite often, site managers will have experimented with various approaches to interpretation, and it may be possible to learn from their successes and failures.

### 3.5.4 Educational use

Describe the current educational use of the site, who uses it and for what purpose. Include, whenever available, information on the number of

individuals/organisations that use the site. Also describe all current facilities. These will include, for example, the provision of guided educational visits, leaflets, education packs, education officer and education centres. Comment on the interest shown by educational establishments in using the site, even when these have not been accommodated through lack of facilities or resources.

### 3.5.5 Research use and facilities

Outline any significant research that has been, or is being, carried out on the site. Include any approved research projects that will be carried out in the future. Comment on the pertinence of the research to site management/safeguard, conservation management in general and academic value. Describe any research facilities that may be available, for example, some sites are equipped with a field laboratory. Include a note on the suitability of the site for research, for example, a site which is open to public use may not be suitable for certain types of research projects.

## 3.6 Landscape

Other sections in the plan will describe most of the components that make up the landscape. Later, during the evaluation process, landscape will be considered in some detail, if appropriate. The purpose of this section is to provide an objective description of features that form the landscape.

In practice, this will often be a summary of visible features discussed under the previous headings. Include topography or landform, land cover and man-made elements. For example:

> The area in general is low-lying, rolling hills leading to a coastal plateau. For the greater part the land is arable with very large extensive modern fields. The site is the only significant area of woodland within the locality. It covers the main part of the highest land and dominates the view from most aspects. There are large numbers of dead elm trees. These are visible from a great distance. There are no buildings or other man-made objects on the site'.

‘The Kidepo Valley National Park comprises two broad shallow valley systems bounded on all sides except the north west boundary, by steep, rugged mountains. To the northwest, the valley system continues beyond the confluence of the two principal watercourses, far into Sudan. Only low ridges or hills and the occasional more conical isolated volcanic peak break the relatively flat topography of the valley floors. Exposed volcanic plugs, which now take the form of rocky kopjes, are also a feature of the valleys.

The vegetation is predominantly savannah grassland with a sparse canopy of associated shrubs and low trees. The canopy becomes reduced as the valley sides rise gently towards the foot of the fringing mountains and become more arid. In the Kidepo Valley, close to the principal stream courses, Borassus palms become an important feature of the landscape.

Within the valley systems there are almost no man-made structures intruding into the landscape. In the southern central area of the Narus Valley, the buildings and structures that comprise the domestic, administrative and maintenance area at Apoka occupy a considerable area. Close to the southern boundary of the park, the ruins at Katurum mark the location of an intended luxury hotel. The venture failed before it reached completion and was consequently never opened. The only other constructed features are the outstations that are mainly derived from natural materials, and become visible only at close range. A short distance from Apoka the airstrip necessarily intrudes a low building and a windsock into the landscape. In the Narus Valley, and to a much-reduced extent in the Kidepo Valley, roads are a necessary feature and a limited intrusion into the landscape. They are unpaved, and surfaces are constructed only from locally derived natural materials.

The mountains which fringe the perimeter of the park are abrupt, steep and rocky. A volcanic landscape, these hills are a complex of peaks, ridges and deep valleys. The vegetation of the lower slopes is a continuation of the valley grassland and scrub, becoming more dominated by trees with increasing altitude.

Close to the higher summit ridges and peaks arid montane forest dominates. This is a rare and declining habitat, and is under considerable threat of modification from fire. In the deeper valleys, where limited moisture will be retained for longer periods and where wildfire penetrates less frequently, a more substantial forest canopy persists. These valleys are important as refuges for the flora and fauna of the forest, which is seriously under threat from the continued and too-frequent burning."

The examples given above simply state the facts, and make no attempt to evaluate the scene. At this stage in the planning process, try to follow the example given above. Avoid words such as beautiful, boring, unpleasant, pleasant etc.

## 3.7 Bibliography

Provide a reference to all papers, reports, journals, books etc. used during the preparation of the plan. Also identify, and provide a location for, all relevant or useful published and unpublished information about the site. For some sites it may be useful to separate the bibliography into two sections:

a) Publications with specific relevance to the site.

b) General reference works.

# 4 NATURE CONSERVATION FEATURES OF INTEREST

Sites are usually selected for protection because they contain one or more important features. A nature conservation feature can be a habitat, community or population.

In theory, it might be possible to write a single, all-encompassing objective for an entire site. In practice, this would be a monstrous statement, so complex that it would be difficult to understand, or cope with, the detail. Monsters can be defeated, or at least controlled, if we break them down into easily recognisable and manageable components. These components are the individual site features.

One of the main purposes of this section is to provide a list of the important features, and to confirm their status.

This section is modular; that is, a separate module, or section, is included for each feature. This means that the process is repeated several times. This may sound complicated, but is far easier than trying to deal with everything at once.

## 4.1 Identification and confirmation of conservation features

### 4.1.1 Previously recognised conservation features

In most cases, the presence of the important conservation features on a site will have been the basis of site acquisition, selection or designation. This means that at some time in the past the site has been evaluated, and that the features so identified should be given some degree of priority. The status of the features will be determined by the policies of the organisation responsible for the site. Legal and other obligations often dictate these policies, for example, compliance with national or international conservation laws and agreements. It is essential that the present legal status of the site features is given adequate attention.

In this section, all identified features should be considered and their status confirmed. Consideration must also be given to the fact that features currently considered important might have been missed at an earlier time. Any additional features will be dealt with in the next section.

### 4.1.2 Selection of additional conservation features

The first step is to list the features that are believed to be important. In theory, all potential features on the site should be considered against appropriate criteria to identify the features that qualify for further attention in the management plan. In practice, the most important should be obvious from the site description, and it should be possible to establish a short list for further assessment. It is probably wiser to include rather than omit features, though this will obviously incur the penalty of having to assess them.

Feature assessment or evaluation is quite simply the means of identifying, or confirming, the features that will become the focus for the remainder of the planning process. It is about asking a question of each provisional feature in turn: Is this feature, in its own right or in association with other features, sufficiently important to be regarded as one of the prime reasons for

maintaining the protected area? Given that the process is about asking a question the conclusion must be an answer to that question. Far too often this section evolves into a rambling, inconclusive description of the feature. Try to avoid that trap.

**IMPORTANT:** The following is a guide to using the Nature conservation Review (NCR) set of criteria for identifying the nature conservation features. This is a standard or conventional approach and many readers will be familiar with the process. Before beginning this section please read the next section 'The confirmed list of conservation features' as you might decide to omit the NCR approach.

**Nature Conservation Review Criteria**
A list of criteria is recommended for the selection of nature conservation features. They are:

- Size
- Diversity
- Naturalness
- Rarity
- Fragility
- Typicalness
- Potential

'A number of different criteria have, by general agreement and established practice, become accepted as a means of judging the nature conservation value of a defined area of land' (Ratcliffe 1977). In 'A Nature Conservation Review', Ratcliffe selected 10 main criteria as a basis of site assessment.

I have reduced the list to 8 by omitting 'recorded history' and 'intrinsic appeal'. 'Recorded history' has limited use when evaluating sites for selection, and I have never seen a useful example of its application in the evaluation of features. 'Intrinsic appeal' may have some relevance when discussing landscape or interpretation, but is not, in my opinion, relevant when considering the importance of a feature for nature conservation.

One or the original Nature Conservation Review factors was the position of a feature, or a site, within an ecological unit. I have replaced this with 'The site from a wider perspective'.

The list of criteria is not intended to be fully comprehensive, nor is there any suggestion that they will all be appropriate for all features on all sites. Use only the criteria that you believe are useful, and include additional criteria as circumstances require.

It is essential that you are not blinkered or constrained by the criteria. They are intended to stimulate, and even liberate, the thought process. It is sometimes useful, but not essential, to divide the evaluation of each feature into separate subsections, one for each criterion. However, it is important that each of the criteria is at least considered. The criteria are best regarded as a series of prompts that guide the planner through a structured discussion.

The criteria often overlap or are interdependent. For example, it is difficult to discuss fragility without considering rarity. Fragile sites are, by their very nature, rare sites.

The criteria should always be regarded as having positive, as well as negative, aspects. For example, high levels of biological diversity are usually valued on nature conservation sites, but, occasionally, high diversity can be the result of human intervention in a habitat that is naturally species-poor.

In their original context, the criteria were used in a comparative sense. That is, by comparing the quality of one feature against another, both on and off the site, it should be possible to rank features and recognise the best. Even when used in this context, it was recognised that because the judgements are comparative, they are also relative. These are not absolute values. Given that many of the criteria merge or overlap, and that some of the values are contradictory, it is not possible to take a total score for the values and assume that this will indicate anything worthwhile. The criteria provide a focus for discussion, and no more.

**The following notes are provided to aid the application of the various criteria. They are not intended as a comprehensive statement on their use.**

#### 4.1.2.1 Size

In most cases, the importance of a feature will increase with size. However, size as a criterion must always be linked to other qualities. Small areas of high-quality habitat will often be more highly valued than large areas of low-quality habitat.

Size is of particular importance where habitats are fragmented and populations isolated. The viability of small, and certainly small, isolated, features and sites is usually questionable. Very small populations are often extremely vulnerable and can become extinct simply through chance, despite appropriate management.

Some sites will contain a high proportion of, or even the entire, local, national or global population of a species. In these cases, regardless of how small the population, it may outweigh all other considerations.

#### 4.1.2.2 Diversity

This criterion can be applied to physical, habitat, community and species diversity. There are clear relationships between each of these. Habitat diversity is dependent on the diversity of the physical environment. Different habitats contain different communities, and the number and variety of species varies from habitat to habitat.

High diversity is sometimes a feature of dynamic or disturbed habitats, giving rise to opportunity for seral vegetation succession. Where this instability is natural, the resultant diversity is highly valued. Conversely, where the disturbance is a consequence of human intervention, the value of the resultant diversity can be dubious.

The maintenance of biodiversity is usually regarded as one of the most important aims of nature conservation. This is largely because one of the most obvious and serious effects of human intervention on the environment has been the wholesale destruction of habitats and extinction of species. Consequently, management is frequently carried out in order to maintain, or even improve, site diversity. However, it must be recognised that there are

occasions when high diversity is undesirable. For example, cut, over-drained, or otherwise modified, peat bogs will contain a greater diversity of communities and species than an intact, natural bog.

In general, naturally diverse habitats are highly valued. There are obvious and good reasons for this. However, there is some danger in ranking one natural habitat above another simply on the basis of the number of species that it contains.

The obligation to maintain diversity is global in context, but there is no implication of responsibility to maximise diversity on any individual site.

#### 4.1.2.3 Naturalness

This is one of the most important criteria applied to nature conservation features. Natural can be a difficult concept, there is no widely accepted definition. Many will argue that natural is a state devoid of anthropogenic influence. But, when did people cease to be a natural component of their environment. Clearly an issue far beyond the scope of this document. In simple term the more natural a habitat the more likely it is to support a natural range of associated species. It could be reasonable to claim that a natural sand dune is of greater value that a highly modified dune system , perhaps covered with a commercial plantation. Generally but not in all cases, the more natural a feature is the greater its nature conservation value. However, conservationists have come to recognise that even highly modified habits can be extremely important for wildlife.

#### 4.1.2.4 Rarity

This is the one aspect of nature conservation that has generally received most attention, and, as a consequence, we are usually aware of the most rare and endangered habitats and species on our sites. These will feature prominently in any management plan. Most often, it is the presence of rare habitats or species that leads us to selecting sites for nature conservation management. Rarity should not be a difficult criterion to apply; rely as far as possible on published, authoritative sources of information. Red data books, and national and international legislation and agreements are the best sources.

#### 4.1.2.5 Fragility

To a greater or lesser extent all features demonstrate a degree of fragility. 'This criterion reflects the degree of sensitivity of habitats, communities and species to environmental change, and so involves a combination of intrinsic and extrinsic factors.' (Ratcliffe 1977).

Fragility should always be considered within a time scale. The degree to which the damage is permanent is a crucial consideration. Fragility is almost invariably linked to rarity; fragile features are, or soon become, rare. Thus, fragile features will often provide a focus for management. In other words, features considered fragile and rare will score highly in the evaluation process.

Do not always dismiss fragility as a negative factor. Many natural communities rely on disturbance for their survival. These, usually ephemeral, communities often occur during the early successional stages of dynamic

habitats. The open communities in mobile sand dunes are a good example. Stabilise the community and they are lost.

Species may also be fragile as a result of habitat change or destruction. Some have such specialised and complex requirements that a seemingly minor change can have devastating effects. Species can be naturally sturdy but have been, are, or may become, a specific target of human over-exploitation.

#### 4.1.2.6 Typicalness

Sites are usually selected and valued because they contain the best example of a particular feature. The qualities that render a feature exceptional are most often the unusual or rare. It is also important that the typical and commonplace are not undervalued. This criterion is particularly useful for providing the justification for safeguarding the typical features in an area.

#### 4.1.2.7 Potential for improvement/restoration

Most features are, to a greater or lesser extent, imperfect. This criterion is used to assess the potential for improvement or restoration. Severely degraded features may have varying degrees of potential for improvement; some will have none at all, while others will have potential for total recovery given the appropriate management. The need to identify potential is crucial. There can be no justification for wasting resources in attempting to manage a degraded feature when the underlying reasons for the damage cannot be reversed.

#### 4.1.2.8 The site from a wider perspective

This is not an easy section to deal with, but it is difficult to judge the significance of a feature unless we have some grasp of the wider perspective. Some reserve managers believe that their responsibility is to maximise biodiversity on their sites, but biodiversity is not about everything everywhere; it is about everything in its place. This means that we need some means of ensuring that we focus on the features that are most important from a global or national perspective, without being too concerned about features which are better represented and protected elsewhere.

It is also essential that we maintain the natural diversity within individual habitats. This is a particular problem in the developed world where sites are small, and habitats are fragmented and isolated. This means that we must take a wider perspective and seek to optimise diversity over a series of sites without assuming a responsibility to do everything everywhere.

In an ideal world, we would work within the framework of global, national and local strategies or plans. Unfortunately, with a few exceptions, these have not been developed, so it falls to the individual responsible for a plan to gain as wide a perspective as possible.

### 4.1.3 Confirmed list of the conservation features

Before proceeding with this section there are a few additional considerations;

**Resolving conflicts between features**

If there are conflicts between features, these can often be resolved by considering the relationship of one feature to others and recognising that, very often, one feature is a factor which will have implications for the management of another. (Factors are covered in detail in the next section of the plan.)

For example, in a northern forest there are two features: the forest habitat and an extremely important population of grouse. The grouse require open areas for displaying males, high forest for nesting and areas of dwarf willow for feeding hens prior to egg-laying. These specific conditions will have to be reflected in the forest objective and, of course, the way in which the forest is managed. Thus, the grouse population is a factor that influences the way in which we manage the forest.

**Combining features**

Occasionally, there may be an advantage in combining several features and preparing a common objective. This will occur when features are not easily separated for monitoring or management purposes. Complex habitat mosaics, where each component qualifies as a feature, are good examples. Whenever it is expedient to combine features, include a detailed, well-considered justification in this section.

This highlights the need to look ahead when confirming the features and the level at which you choose to describe them. The level at which you define features will determine the level at which you need to monitor their condition.

**Ranking or prioritising features**

Ranking or prioritising features can be extremely difficult. Obviously, there will be no problem in ranking two features where one is of international importance and the other of limited local importance. The only reason for ranking would be in situations where the safeguard of one feature threatens another. Under all other circumstances, it is probably wise to regard all features as equal.

**List of features with status**

The preceding section will have identified the features that will become the focus for the remainder of the planning process. The next stage is to present a list or table of all the confirmed features. Provide the status of each confirmed feature. The following table could be used:

| Feature | International status | National status | Local status |
|---|---|---|---|
| Upland oak wood | / | / | / |
| Red squirrel | | / | / |
| Song Thrush | | | / |

If possible this table should be tailored to meet the specific requirements of an organisation or a country. The following example is used by a UK conservation organisation:

| Feature | International status, for example, Ramsar | European status, SPA SAC | National (UK) status, SSSI | UK BAP priority habitat /species | Local BAP priority habitat /species |
|---|---|---|---|---|---|
| Upland oak woodland | | *SAC* | *SSSI* | *habitat* | *habitat* |
| Red squirrel | | | *SSSI* | *species* | *species* |
| Song thrush | | | | *species* | *species* |

For many sites a table, similar to the above example, can replace the entire features selection or evaluation process. In simple terms, the selection of features is based entirely on the legal or locally recognised status of the feature. In an ideal world, where resources are plentiful, all recognised features would be given some attention in the plan. Unfortunately, in reality' there are rarely sufficient resources even to manage the most important features. Consequently, the planner may have to be selective. When considering species features, in cases where the habitat which supports the species is also a feature, the management of the habitat may be sufficient to safeguard the species. In these cases, the species will not need to be included in the feature list.

## 4.2 Objectives

*IMPORTANT: FROM THIS POINT, TO THE END OF THE SECTION, YOU WILL NEED TO TREAT EACH FEATURE INDIVIDUALLY. THIS MEANS THAT YOU WILL NEED A SEPARATE SUB-SECTION FOR EACH FEATURE.*

### General guidance.

**Objectives should be unequivocal statements.**

Objectives should not be open to interpretation. Many earlier management plans contained objectives that were so vague they could be taken to mean almost anything. Typically, these objectives expressed an intention to maintain or improve a feature, but did not provide an indication of what was to be maintained or when improvement was complete. The following example of an ideal objective is taken from an actual management plan and is typical of an approach which is quite often encountered:

'To maintain and enhance the diversity of all natural and semi natural habitats'

What does it mean? If the objective was simply to maintain the diversity, then we might conclude that whatever condition prevailed at the time when the objective was written should be maintained. But it is also indicated that diversity should be enhanced. There is nothing in the plan that provides any indication of what the enhanced state may be. Since the objective is open to endless interpretation, how will it be possible to know when the objective has been achieved?

Even where an objective is to maintain something in its present condition, that condition must be described and quantified. If not, how will anyone know that it is being maintained?

**Objectives must be desirable.**

This appears to be such as obvious statement that you may be wondering why is it included. Unfortunately, many management plans contain objectives that are by no means desirable. Many planning systems begin with an ideal objective, then consider the impact of the factors, and modify the objective so that the factors are no longer of consequence. Where the factors are natural, this approach makes some sense. Unfortunately, it is common practice to include anthropogenic factors in this analysis, and to compromise the protection of a feature in order to accommodate potentially damaging human activities. While compromise is an essential and useful tool, we should never accept second best for the features that we are required to protect.

**Objectives must be measurable.**

Most objectives in most management plans are not in any way measurable. If objectives are not measurable, how will we ever know that they are being achieved? Clearly, objectives for conservation features must be quantified and measurable.

**Objectives should be achievable, at least in the long term.**

This is a very obvious statement since there can be little purpose in pursuing unobtainable objectives. However, we must recognise that it may take decades even centuries to obtain our objectives. When attempting to decide

if an objective is achievable do not take account of resources. Provided that something could be achieved if unlimited time and resources were available, then we might consider the objective to be achievable. In some respects, therefore, objectives can be seen as an aspiration.

**Objectives must not be prescriptive; they define the condition we require of a feature and not the actions or process required to obtain or maintain that condition.**

Objectives are an expression of purpose. Why differentiate between the purpose of management and the management process? The answer is obvious: the management that we undertake in order to safeguard a feature will vary according to the condition of a feature. For example, when dealing with a damaged feature the management necessary to return the feature to the condition we require may be quite different to the management needed to maintain that condition. These two management approaches can be fundamentally different, or may simply vary in intensity. For example, when dealing with grassland that has become invaded by scrub, and where our intention is to maintain grassland, we could begin by clearing or burning the scrub and applying heavy grazing pressure. Later, when the scrub has been successfully removed, we could introduce lighter grazing to maintain the grassland.

**Objectives must directly address the feature.**

Again, a rather obvious statement, but, unfortunately, many objectives in management plans are concerned with addressing the factors. Examples such as 'to control illegal hunting' are commonplace. Hunting is controlled to serve a purpose, i.e. to protect the animals that are being exploited. This means that the animals are the feature and hunting a factor. The control of hunting is a management activity. Many management plans are packed full of objectives that are in fact management activities. Such plans are often quite good at telling us what we must do, but rarely why we do things. A plan must contain both, and each should be in an appropriate section.

**Presentation**

Deal with each feature in turn and number them sequentially. If you follow the numbering system set out in this guide the conservation features and objective will be in section 4.6 of the plan. The second number (x in the following example) is the number of the conservation objective.

4.2.x.1 Name and summary description of the feature.
4.2.x.2 Objective – in plain language
4.2.x.3 Performance indicators
- 4.2.x.3.1 Factors and operational limits
- 4.2.x.3.2 Attributes, specified limits

### 4.2.1 Name & summary description of the feature

This is a succinct description of the feature (no more than one or two sentences). As with all sections of the plan, the description should be written in plain language. The purpose of the description is to provide the reader with a clear understanding of what the feature is. For common species this is obvious and easy, as most people will recognise a species from its name. However, some rare or obscure species that do not have common names will require some supporting explanation. Photographs can be included. Habitats may be more demanding and require longer descriptions.

### 4.2.2 Management objective

Objectives lie at the very heart of the management plan, and are the most important component of any plan. This section should include the discussion and justification that led to the development of the objectives.

Objectives are clear, site-specific descriptions of what we want for each feature. They are portraits, in words, of a feature in the condition that we require. The following example will help:

**Objective for an upland acidic oak woodland NNR**

Woodland will cover the entire site, and it will be maintained as far as possible by natural processes. A changing or dynamic patchwork of temporary glades will ensure that up to a quarter of the woodland canopy is open at any time.

The trees and shrubs will be mainly locally native broadleaved species, such as sessile or hybrid oak, downy or pendulous birch, ash, rowan, holly, elm, and hazel. Occasional beech, sycamore and conifer species will be tolerated but they will not become dominant in the canopy or the shrub layer. The abundance of individual species and tree density will vary throughout the woodland. There may be dense stands of one species or mixtures of several species occupying a given area at any one time.

The woodland will contain trees and shrubs of all ages and sizes, as mixtures or in single aged groups. Plentiful tree seedlings throughout the site will develop into saplings in the open glades. There will be abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches, while some will be partially or completely hollow. Throughout the site, fallen dead wood, ranging from whole trees to small branches, will be dense enough to obstruct walkers in areas away from the paths. This will provide a variety of habitats for dead wood dependent species of moss, liverwort and fungi, and for specialised invertebrates that depend upon dead wood at some stage of their lifecycle.

The field and ground layers will be a patchwork, including areas dominated by heather, or bilberry, or a mixture of the two, areas dominated by tussocks of wavy hair grass or purple moor grass, and others dominated by brown bent grass and sweet vernal grass with abundant bluebells. There will also be quite heavily grazed areas of more grassy vegetation. The field layer will be generally fairly rank and well developed, and this, together with the canopy, will help to maintain high humidity levels, which are crucial to survival of many mosses and liverworts. On rocky areas or areas of thin acidic soil, the ground layer will form an extensive, thick carpet of mosses and liverworts with few other plant species present.

Steep rock faces and boulder sides will be adorned with mosses and liverworts and filmy ferns. Patches of bare rock, where wefts of mosses or liverworts have peeled away naturally, will provide opportunities for re-colonisation. Similar processes will occur on living tree trunks and large branches, and on fallen timber in the more humid areas.

The lichen flora will vary naturally depending upon the chemical properties of the rock and tree trunks within the woodland. Trees with lungwort and associated species will be fairly common, especially on the well-lit woodland margins.

The varied structure of the woodland will improve the diversity of lower plant flora (i.e. mosses, liverworts, lichens and fungi), which will benefit from the range of habitats and niches provided. This varied structure will also provide the diversity of shelter and food to support populations of birds, including pied flycatchers, redstart and wood warblers, and mammals including several bat species, pine marten, otter and badger.

This example should create a picture in your mind of what the woodland will look like when the objective has been met. At this stage, it is a vision of what we want. There has been no attempt to quantify the feature in any way; that comes later when the performance indicators are introduced.

#### 4.2.2.1 Favourable Conservation Status

Deciding what we want is not always easy. One way forward is to base objectives on the concept of Favourable Conservation Status (FCS). In broad terms, FCS is the desired status of a feature, habitat or species, over its entire range, within a defined protected area, or at any scale in between. Although the concept of FCS originates in international and European treaties and Directives, it is a sound idea that can be adopted for any nature conservation management plan.

It is important at this point to clearly distinguish FCS from 'favourable condition'. The latter term is defined as

> 'The condition for a feature, expressed in terms of the abundance, distribution, and/or quality of that feature within a site' (based on JNCC, 1998 *A statement on common standards monitoring*)

The key difference between FCS and favourable condition is that whereas 'condition' defines the state of a feature at a given point in time, 'conservation status' incorporates both the state of a feature at a point in time and the factors affecting it, and hence the feature's future prospects. FCS is thus a more forward-looking basis for expressing conservation objectives than favourable condition. The generic definition of FCS as used in this guidance is given in Box 1.

**BOX 1**
**GENERIC DEFINITION OF FAVOURABLE CONSERVATION STATUS**

**Habitat features**

**For a habitat feature to be considered to be at FCS, ALL of the following must be true:**

- The area of the habitat must be stable in the long term, or increasing.
- Its quality (including in terms of ecological structure and function) must be being maintained.
- Any typical species must also be at FCS, as defined below.
- The factors that affect the habitat, including its typical species, must be under control.

**Species features**

**For a species feature to be considered to be at FCS, ALL of the following must be true:**

- The size of the population must be being maintained or increased.
- The population must be sustainable in the long term.
- The range of the population must not be contracting.
- Sufficient habitat must exist to support the population in the long term.
- The factors that affect the species, or its habitat, must be under control.

This definition of FCS for habitats and species 1 is based on, and is entirely consistent with, the statutory definition of FCS for habitats and species given in Article 1 of the Habitats Directive (Council Directive 92/43/EEC of the 21st May 1992 on the conservation of natural habitats and of wild fauna and flora [*Official Journal of the European Communities* OJ no. L206, 22.7.92, p.7,

FCS is an uncomplicated and common-sense expression of what we should attempt to achieve for all important features on nature conservation sites. It is a generic statement that could be applied anywhere. It is not an objective, but it provides a framework for constructing objectives.

Above all, objectives must be site-specific. They must be tailored to meet the particular conservation values of the features on a site or group of sites. So how can we build an objective around this framework?

For habitats, we can begin by examining the current condition of the feature on the site. If any part, or parts, of the feature appear to be in the condition that we require then we have an excellent starting point. In these circumstances, the next step is to decide how much of the habitat in this condition that we want and where we want it.

In many situations, we will not find features in the conditions that we require. In these cases, deciding what we require will be more difficult, and we will have to rely on experience from other similar sites.

FCS requires that for both habitats and species the size must be stable or increasing. The distribution of a feature is also extremely important. So, we can begin by providing some indication of the size or extent and distribution of the feature. In short, how much and where.

Sometimes this is not as straightforward as it may appear. We may have to deal with situations where one feature is in direct conflict with another. This might happen when two habitats, for example woodland and heath, can occupy the same space; an increase of one leads to the loss of the other. To overcome this, we could set a minimum area for both habitats and express this as a percentage of the whole. For example, we might say that at least 70% of the site must be covered by woodland and at least 20% by heath. Once we have dealt with size/extent, we need to move on to consider other values. For a habitat, we have to find some means of expressing the quality that we require. The temptation may be to provide exhaustive lists of species that we consider important. But species lists are more likely to confuse than inform. We need to focus on the most important species, or groups of species, that we want, and also to decide what we don't want. For example, we might stipulate no invasive alien species or a specified tolerance for some exotic species.

Nature conservation is often about maintaining highly valued semi-natural communities, such as managed grassland, where allowing, or encouraging, natural processes to continue would result in the destruction of the community and loss of diversity. In these cases, it is reasonably easy to define the condition that we require of the feature with some precision.

Conversely, and particularly when dealing with more natural features, there are occasions when we wish to enable the feature to develop in response to natural processes. We may accept that on-going natural processes can deliver a wide variety of acceptable conditions for a feature, and we may not be too concerned about the precise conditions that result. However, even in these cases, we should make every effort to define the outcome. If we don’t, then anything could happen and the consequences could be serious. It is easy to describe what we want in simple plain language.

For example, when managing an upland acidic oak woodland which want to develop as a sustainable natural high forest, we could state that we want a woodland that:

- occupies at least 80% of the site
- is naturally regenerating, with plenty of seedlings and viable saplings
- has a changing pattern of canopy gaps
- has a canopy and shrub layer that includes locally native trees of all age classes
- has an abundance of standing and fallen dead wood to provide habitat for invertebrates, fungi and other woodland species

The definition of Favourable Conservation Status points to the future: habitats and populations must be sustainable. Therefore, it is important not to overlook the factors that are likely to affect the feature. These can be included as part of the objective.

For example, the woodland will have:

- no invasive alien species
- no more than 10% sycamore in the canopy

In the case of some habitats, we may decide that a very wide range of conditions will be regarded as acceptable for the feature.

For example, on a coastal sand dune system we might not be concerned about the composition and structure of the vegetation providing that the following conditions were met:

- We are confident that it consists of a dynamic, shifting mosaic of sand dune communities (and we state what these could be), and where the actual composition and structure is largely governed by natural processes;

- Regardless of how the feature evolves, a sufficient area of habitat exists to support the full complement of typical species that depend upon it. This should include any such species that are features of the site in their own right. (*Indeed the interpendence of features, particularly the dependence of species on habitats, may often constrain the scope for accepting natural change.)*

- The populations of typical species and their distribution are also governed, as far as possible, by natural processes (again, provided this is compatible with the obligation to maintain species populations that are themselves features of the site)

- The factors which influence or may influence the sand dune system are under control.

Finally in this section, it is important to note some generally applicable points concerning the development of site-specific expressions of FCS:

- It is important to include supporting text, clearly setting out why decisions were made.

- In the long term, we need to keep objectives, including those relating to extent or population size, under review. There are two main reasons for this. Firstly, our perception of what is valuable in conservation terms may change over time. Secondly, our understanding of features, the way they behave, and particularly the relationship between feature condition and factors, will develop over time.

- We should avoid any temptation to confuse the site-specific definition of FCS by including management activities. Management is likely to change with time. We will, in any case, be including operational limits for factors affecting the features in the performance indicators, which will often include operational limits for management actions, and we are likely to review and revise these at more frequent intervals than the conservation objectives.

#### 4.2.2.2 Presentation

Once we know what we want, we need to share this information with others. Management plans are about communication, so we should not assume that the audience is restricted to scientists or conservationists. Occasionally, there may be circumstances where a plan is prepared entirely by experts for use by experts, but, in my experience, this is extremely rare. Conservation management should be an inclusive activity, and providing stakeholders with access to management plans is possibly one of the best ways of encouraging their involvement.

We should, therefore, express our objectives in plain language. In general, conservationists can be very good at communicating with each other. For many good reasons, we share a common language, but the words, and particularly abbreviations, that we use are not generally understood. This is, of course, true of most professions. The following is taken from the medical profession. The first example is written using technical language and the second in plain English. The meaning is the same in both.

**Original version**
Lansoprazole is effective in the treatment of NSAID associated GUs and DUs and Zollinger - Ellison syndrome and in the eradication of helicobacter pylori. Side effects including LFT alteration, gynaecomastia, petechiae and RF have been reported. Stevens-Johnson syndrome, toxic epidermal necrolysis and erythematous or bullous rashes including erythema multiforme have been reported occasionally. Take 30mg cap o.d.

**Plain English version**
Lansoprazole is a drug that is very useful in the treatment of ulcers in the stomach and first part of the intestine. Side effects include changes to liver function, breast formation (in men), skin rashes, kidney failure and a few very rare, but serious, skin conditions. Take one capsule once a day.

Dr Anne Rivett

It is important to realise that the language we use may be similarly incomprehensible to most people, and to use plain language whenever possible. (The quantified and measurable components of the objective will, of course, be written using precise scientific language.) Using plain language does not imply that we compromise or diminish the meaning of the statement. We should not be patronising and we must not diminish the scientific meaning of our objectives. It is also a good opportunity to inspire the reader and give them a feeling for how important or special a feature is.

We should use maps, photographs and illustrations to help the reader understand our vision. Often, an annotated map is the best way of describing the distribution of a feature on a site. Photographs will be especially useful if the feature is a rare or unusual species.

**The following statements are all examples of work completed for actual sites. They may be imperfect, but they demonstrate a range of different approaches.**

**Muddy gravel**
The following is a description of how we would like to see the future distribution and patterns of plants and animals on the site.

When the tide is out surface marks like tracks, casts, tubes and holes will only hint at the vast diversity of wildlife that lives beneath the surface of the sediment. This community of animals comes to life on the rising tide. Peacock worms put out their feathery tentacles to catch the minute particles of food within the water. Feeding siphons from hidden bivalve seashells emerge and the voracious king rag feeds on the smaller segmented worms. The segmented worms are made up of a balance of mud feeders, filter feeders, scavengers and predators. This variety of creatures is maintained in the long term.
On the surface, creatures include sea snails, sponges, sea squirts, crabs, native oysters and seaweeds such as mermaid's tresses, thread-like red seaweeds and sugar kelp. These are richer on the lower shore. This variety of seaweeds and animals is as result of the absence of dense blankets of fast growing green seaweeds. Occasional non-native oysters from shellfisheries or invasive species such as the slipper limpet are tolerated but will not become dominant. Natural processes are not interfered with.

**Vision for the marsh fritillary population**

There will be a very large population of marsh fritillary butterflies at Rhos Llawr Cwrt, which will be viable in the long term. Because the marsh fritillary is parasitised by a wasp, the number of butterflies in the population will vary over a cycle of several years, but during the peak years, a visitor taking a walk through the site on a sunny day in June will see several hundreds of adult butterflies. In these years the caterpillars, feeding communally in silken webs on their food-plant devils bit scabious, will be found in their thousands throughout large areas of Llawr Cwrt and Cors y Clettwr.

Rosettes of the food-plant will be both very numerous and widespread throughout the cattle-grazed rhos pasture, growing amongst a short turf of grasses, sedges and flowering herbs with scattered tussocks of purple moor grass and rushes providing shelter for the caterpillars in wet weather. This colourful wet grassland mosaic will extend throughout Llawr Cwrt, Cors y Clettwr and the fields which were drained and reseeded for agriculture in the 1980's but have reverted back to rhos. Dense mixed hedges of hawthorn, hazel, mountain ash and other locally native species grow around the boundaries and between fields and offer vital shelter to the breeding adult butterflies during poor weather in what is otherwise a very exposed landscape with little shelter.

There are a number of smaller breeding populations of marsh fritillary on rhos pasture sites within 5 km of the National Nature Reserve. Butterflies from Rhos Llawr Cwrt will occasionally visit and breed on these sites and butterflies from the smaller populations will visit Rhos Llawr Cwrt. This exchange of butterflies will help to keep all populations in a healthy condition.

**Vision Statement for Blanket Bog**

The following is a description of how we would like to see the future development and distribution of plants and animals on the blanket bog:

From a high vantage point, blanket bog extends as far as the eye can see. At a first glance the bog looks a uniform greenish-brown colour, but a second glance shows a rich mix of reds, browns, greens, yellows and in summer, the nodding white heads of cotton-grass.

A walk over the blanket bog will further show you the wide range of plants that thrive here. The bog plants grow on a deep layer of waterlogged peat, often several metres thick and made up of the partly decomposed remains of previous bog plants. The surface of the bog is made up of a mixture of small, moss-filled hollows and slightly drier hummocks where heathers grow. You may also see an occasional small bog-pool.
The tallest plants, standing at about knee-height, are cross-leaved heather, which grows in the wetter areas, common heather and cotton-grass. Growing amongst these plants you will also find bilberry, crowberry, cranberry, deer grass, and purple moor-grass.

Below these taller plants you can see sphagnum bog mosses. These spongy, water-holding mosses form a low, almost constant and colourful carpet in a variety of greens and reds. You may also see insect-eating sundews and the fragrant yellow bog asphodel on some of the drier hummocks.

The larvae of the large heath butterfly feed on the flower heads of cotton-grass and so you may be lucky enough to see some of these rare butterflies on sunny days in early summer. The blanket bog and surrounding wet heath and acid grassland areas form part of the feeding and nesting areas for birds such as hen harrier, merlin and peregrine falcon.

### 4.2.3 Performance Indicators

Performance indicators provide the evidence that we use to determine whether or not we are meeting our conservation objectives. Hence, a conservation objective is significantly more than the sum of the performance indicators.

Performance indicators encompass both 'operational limits' (which apply to factors) and 'specified limits' (which apply to features). Both must be within the defined limits in order for it to be concluded that we are meeting our objective.

#### 4.2.3.1 Factors & Monitoring

Conservation objectives are more concerned with tomorrow than today. That is why the definition of Favourable Conservation Status requires the factors to be under control. A superficial view of a feature could suggest that everything is in order, but when the factors are examined the initial conclusion can be overturned.

The conservation management of habitats and species is mainly about controlling factors, and particularly the consequences of human intervention, past, present and future. Our ability to achieve conservation objectives will always be constrained by our ability to control factors. Factors may include anything that has influenced, is influencing, or may influence, the feature. It is important that both negative and positive factors are considered, since both have implications for management. There is a slight complication in that individual factors may have only a limited impact on a feature, but in combination they can become a serious issue. This means that factors should be considered both individually and collectively.

Factors are agents of change. If we can identify current and future factors, we will, in some cases, be able to predict the direction of change and be able to identify the attributes of a feature that are most likely to demonstrate the change (see the section on attributes). This relationship between factors and attributes is the reason why factors are considered at this stage in the plan.

It must be stressed that, while a range of factors should be considered, ultimately, we should concern ourselves with setting operational limits for those factors which, if breached, are so significant to the condition of the habitat or species that we would have to conclude that the feature is not favourable on the grounds that it is either being, or is likely to be, significantly adversely affected.

Factors are considered in two main sections of the plan and for each feature. At this stage, we concentrate on the impact that the factor may have on a feature and identify the critical factors that should be monitored or recorded. Later, in the Management Rationale, the management implications of these factors are considered. The choice of attributes (next section) will also be influenced by factors.

The recommended approach to this section is that each feature should be considered in turn. However, given that factors usually impact on more than one feature on a site, it is useful to produce a master list of all the factors that may influence any of the features. Factors relevant to individual features may

then be selected from the list. Be aware that a factor may affect different features in different ways, so much so that a factor can be a positive influence on one feature but have a negative influence on another.

**Types of factors**

The following list is provided to aid the identification of factors. Some of the categories will be important on all sites while some will rarely be encountered. Similarly, it may be appropriate to identify and record factors under different headings to those given here.

- Owners, occupiers and other stakeholder interests
- Factors arising from legislation or tradition
- Physical considerations and constraints
- Natural factors (on and off-site)
- Anthropogenic factors (on and off-site)

We can never be certain that we have identified all the factors, and nor should we assume that we fully understand the implications of each factor. However, management planning is a process, and we can only react to what is known and understood at any given time.

**How the factors affect the features**

Once the factors have been identified, the effect that the factors will have on the feature must be considered. There is a complication: although individual factors may have a limited impact on a feature, in combination they can become a serious issue. This means that factors should be considered both individually and collectively. One of the key areas requiring attention is how the feature may change as a consequence of the negative factors. It has already been pointed out that factors can have either a positive or a negative impact on a feature. Once again, this gives rise to a minor complication, best described by example. A positive factor as far as the maintenance of grassland is concerned is the impact of grazing. Remove grazing and, in most cases, the grassland will revert to scrub and eventually forest. However - and this is the complication - the utilisation of domestic stock to maintain grassland is regarded as management. Regardless of how we regard the application or maintenance of grazing, it is a factor. The management action that we take is in fact to control grazing. Later, in the rationale section of the plan, the relationship between factors and management will be discussed in full. In short, management is usually about controlling factors.

The next essential element is to consider the extent to which negative factors can be tolerated, and how much impact is required from positive factors. The appropriate level for any factor is that which enables a feature to be maintained at Favourable Conservation Status.

The changes to a feature that we are able to predict as a consequence of the effect of the factors will help with the selection of performance indicators. It is, therefore, important that links between this section and the performance indicators are recognised.

**Stakeholder interests**

The purpose here is to set out the stakeholder interests in the protected area. I have used the word 'stakeholder' because this is currently the term that international conservation appears to favour.

It is essential that the owners' and occupiers' interests are established and taken into account, but I am unsure as to the extent to which we should be influenced by stakeholder interest. The definition of stakeholder seems to be all-inclusive, and appears not to differentiate between those with a legitimate interest and those who wish to exploit the protected area, sometimes illegally, for their own gain. The management of sites must be as inclusive as possible, but we must not forget that the prime function of a protected area is to safeguard the wildlife. Even where a wildlife site is managed primarily for tourists and profit, if management does not ensure the protection of the wildlife, there will be no tourism and consequently no profit. Therefore, there can be little sense in allowing stakeholders to engage in activities likely to cause long-term, irrevocable damage, or threaten the wildlife or other features of interest.

In some instances, it will be possible, after discussion with the stakeholders, to make some statement about their motives and aspirations for the site: for example, to continue the present use, to increase profit, to maintain or improve the landscape. For others, it may only be possible to gain an indication of future intent based on current and past practices.

**Natural factors**

There is a considerable range of natural factors that can affect our ability to manage sites, for example, accreting dune systems, cliff erosion, climate change and even volcanic action.

**Anthropogenic factors**

It is essential that the impact of human activities on the features is given sufficient attention. Past human activities, which may have initiated a sequence of change that is not yet complete, or which have had an enduring effect, should also be considered. As with natural factors, these can be both positive and negative.

When preparing a plan for a species that is not confined within a site, combine this heading with the next, and consider the impact of human activities, both local and global. When dealing with species, the most obvious areas of concern will be loss of suitable habitat and direct exploitation of the species.

Do not forget that visitors or tourism can have a serious impact on our ability to protect the site and the features.

**External factors**

Include the factors that arise outside the site boundary and may have a significant impact on the features. There are very many external factors that can have quite serious consequences for site management. Sites can never be totally isolated from their surroundings. For reporting purposes, it will be useful to differentiate between on-site factors that can, or could, be controlled through site management, and external factors that cannot be controlled by on-site management.

The biggest problem with this section is knowing what to include and when to stop. Obviously, consider all local factors that will have an effect on the features. For example, the inappropriate use of pesticides, herbicides or fertilisers adjacent to a site will sometimes have damaging consequences for the site. Urbanisation of the surrounding area is another problem.

In addition to local factors, there will be national and global factors to consider. For example, many species and habitats are suffering from the effects of aerial pollution, particularly acidification. For sites where aerial pollution has a discernible effect, this must be considered within the plan. However, our ability to deal with aerial pollution on a site basis is extremely limited. The best that we can do is to highlight the problem and perhaps seek to influence politicians or others who may be able to find a means of control. We should at least ensure that air quality is measured on or near the site.

The question most often asked of this section is, 'should the possible consequences of climatic change be considered?'. Clearly, if any significant and measurable change is taking place then it must be included. However, when there are no current indications of change on the site, there is little purpose in wasting effort in speculative discussion. Remember that the planning process is dynamic. If the site condition shows any indication of change, then management will, if possible, be modified to ensure that objectives continue to be met.

**Factors arising from legislation or tradition**

Identify both the legal and non-legal obligations placed on the managers of the site. These will include legal obligations such as compliance with wildlife protection laws. Non-legal obligations can arise for a variety of reasons. The most obvious is the need to maintain good relationships with neighbours and the public in general. This section is also used to identify any obligations on the part of others in respect of the site. These obligations will nearly always be legal and arise from conditions of tenure, including shooting, hunting and grazing rights. For example, graziers may be obliged to give notice of any changes in stock levels.

**Physical considerations/constraints**

Identify and discuss the implications of any physical management constraints. For example, it may not be possible to use vehicles on steep slopes.

**Position in an ecological unit**

Despite the obvious need to consider species and habitat within the context of ecological units, there is no standard or easy definition of an ecological unit. The obvious and most easily recognisable units are offshore islands.

An ecological unit is best regarded as an area where habitats and species are isolated, not necessarily by the sea, but by other physical features such as mountain ranges. Urbanisation and the intensive agricultural use of great tracts of the countryside have led to the fragmentation of many, once extensive, ecological units. The small remaining isolated relics are now best regarded as units in their own right. The obvious and most serious consequence of this isolation is that features become very vulnerable. When species are lost, the chances of natural replacement are low or non-existent. Species that require large territories are usually the first to disappear.

The size of a unit is crucial: the bigger the better. Individual sites may be an entire ecological unit, but, more often, they are part of a much larger unit. A location within, and part of, a very much larger unit can be of considerable benefit. It may be impossible, regardless of other positive factors, to protect features unless control is gained over an entire ecological unit.

**Features as factors**

When considering populations of species as features, the habitat that supports the population is usually one of the most important factors. However, it is not unusual for both the species and the habitat to be considered important features of the same site.

Complications will occasionally arise when features require conflicting management. For example, elephants in an African park may be regarded as an important feature of the site. The park habitat, forest savannah, is also a feature. Clearly, there will be conflicts between the need to maintain areas of forest savannah and the need to maintain a viable population of elephants.

For this example, and similar instances where the interest of a species is in potential conflict with the habitat that supports it, it will be necessary to decide which is the most important. In most cases, you will conclude that it is not possible to safeguard a species unless there is sufficient good quality habitat to support it, and thus the habitat is more important than the species. The consequence of this conclusion is that the elephants may have to be managed, even controlled, in order to maintain the savannah in the required condition. Of course, there will also be occasions, particularly when managing very rare and threatened species, where the habitat will have to be modified in order to meet the requirements of the species.

**Operational limits**

Our ability to maintain a feature at FCS comes in part from our ability to control the factors. Given that factors can be positive or negative, control is taken to mean: to remove or minimise adverse impacts, or to apply or increase desired effects. If we express the levels within which a factor may be considered to be acceptable, we have provided a performance indicator. These levels are operational limits.

We need to define operational limits for any factors that are considered to have a significant impact on the features. For example, it is often necessary to set a level of tolerance for the water table in a blanket bog, or the level of grazing on a grassland. Other examples could be a limit on hunting, a limit on livestock grazing levels, or a limit on human use/access.

Operational limits can be the total exclusion of a factor, the acceptance of its ‘presence’ below an upper limit, a requirement for it to be between upper and lower limits, or a lower limit only. Operational limits are an early warning system that should trigger action before it is too late. They are used to express the range of values within which a factor can be considered beneficial to, or does not threaten, a feature. There may be situations where we have identified a factor that we know affects the feature, but we do not sufficiently understand the factor-feature relationship to set operational limits. The best we can do here is set very wide limits, or none at all, and monitor

the feature attributes (see next section) while keeping the factor under surveillance.

Operational limits require an upper or lower limit, or both. In general, upper limits are applied to undesirable factors - they define our maximum tolerance - and lower limits are applied to positive factors. In reality, there are few occasions where the impact of a factor is sufficiently well understood that we are able to set both upper and lower limits with any confidence. In most cases, the best that we can achieve is to set a lower limit for positive factors and an upper limit for negative factors. Operational limits should only be set at the current level of influence of a factor if that is considered compatible with the achievement of our objective for the feature.

For some factors it may not be possible to set operational limits. These will fall in to two categories:

- Factors that we could measure, but currently have no idea at what level to set a limit (these will usually require surveillance). If we have absolutely no idea where to set operational limits for a factor, we need to ask ourselves what led us to consider it an important factor in the first place.

- Factors for which we could set operational limits in order to guide management action, but which we are currently unable to measure. In these cases we identify the need to develop a suitable methodology.

When the value of the factor is found to fall outside the operational limits, we at least have evidence to suggest that management is inappropriate and, most importantly, that the condition of the feature may deteriorate and can no longer be considered to be favourable.

**Monitoring factors**

Monitoring factors requires exactly the same care and consideration required for attributes (see following section).

Monitoring is only possible when the factor is quantifiable. Recording, surveillance, or indeed research, will be required when the relationship between a feature and a factor is unclear. For example, one of the factors that will affect grassland is grazing. In some cases, it may not be possible to identify the appropriate grazing levels (operational limits) required to achieve the desired sward condition. Where this is the case, the site manager should implement what is considered to be the most appropriate grazing regime, while also setting up a programme of surveillance to look at the sward condition and the stocking levels. In time, it may be possible to establish what the most appropriate stocking levels are.

Determining that factors are within operational limits must not be taken as conclusive evidence that a feature is favourable. The attributes must also be within specified limits.

#### 4.2.3.2 Attributes & Monitoring

Attributes are the characteristics, qualities or properties of a feature that are inherent and inseparable from the feature.

Attributes should be indicators of the general condition of a feature, and should be informative about something other than themselves.

At this stage in the planning process we identify attributes that can be used as performance indicators. Attributes are monitorable characteristics of a feature that provide evidence of its condition. As with factors, attribute selection is a site- and feature-specific process. Attributes describe the condition of a feature, rather than the factors affecting it and its future prospects. Therefore, although monitoring attributes provides the information necessary to assess feature condition, it provides only part of the evidence required to determine whether or not we are meeting our objectives. The remaining evidence comes from the factors and operational limits (see previous section).

It is essential that the reasons for selecting each of the attributes that will be used as performance indicators are clearly explained. These should include, why an attribute has been selected, what information it is intended to convey, and what, if any, is the relationship between the attribute and the factors.

Because it is not feasible to measure the totality of a feature, there is a need to focus on a limited range of attributes. Where we are aware of negative factors, and understand their impact on a feature, it may be possible to predict the nature of the changes that are likely to take place, and to select attributes and set targets for them on that basis. For example, the application of artificial fertiliser to a traditional hay meadow would lead to an increase in some undesirable species and a corresponding loss of desirable species. Both groups of species would provide useful performance indicators.

Given the above, it is potentially very useful to be able to differentiate between attributes that are indicators of the impact of a factor, and those that directly represent what we require of a feature. This is a further reason for justifying the selection of each attribute.

Since attributes must be quantifiable and monitorable, it is important to discuss how this can be achieved at this stage, but the details of the monitoring methodology can be left until later.

It may not be possible to identify sufficient attributes. Where there is a shortfall of information, this should be noted and relevant surveys or research should be planned. In the meantime, the plan should carry a warning that the list of attributes does not provide enough evidence to determine the current condition of the feature with confidence. This is not as unsatisfactory as it may appear, and does not negate the value of an incomplete approach. Where it may be highly desirable to deal in certainties, this is not a luxury that conservation managers can afford. Management decisions are made – indeed can only be made - on the basis of the best available information.

## EXAMPLES OF ATTRIBUTES

### FOR SPECIES

**Quantity**

- The size of a population, for example:
  - The total number of individuals present.
  - The total number of breeding adults.
  - The population at a specified point in an annual cycle.
- The extent or distribution of a population

**Quality**

- Survival rates
- Productivity
- Age structure
- Sex ratio

### FOR HABITATS

**Quantity**

- Size of the area occupied by the habitat, or by one or more constituent communities
- Distribution of the habitat, or of one or more constituent communities

**Quality**

- Physical structure (a wide range of attributes is possible here, and are very feature-specific)
- Presence, abundance, relative proportions, distribution of individual species or groups of species indicative of condition
- Presence, abundance, relative proportions, distribution of individual species or groups of species indicative of change

### ADDITIONAL PERFORMANCE INDICATORS FOR WOODLAND

**Quality**

Tree and shrub layer canopy cover
Tree and shrub canopy composition
Canopy gap creation rate
Tree regeneration
Age structure of trees
Volume of dead wood
Field and ground layer composition

### Specified limits for attributes & monitoring projects

**Limits: the background**

There is considerable confusion concerning the use of limits in management plans. During the 1980s there was parallel development of the concept in the USA and UK. Since that time, several similar approaches have appeared in the literature. All have a common basis, in that they recognise the dynamic nature of sites and features and the natural variability of habitats and species. The most widely known system, Limits of Acceptable Change, comes from

the USA, and was mainly concerned with defining the carrying capacity of a site. In the UK, the approach was initially outlined in the Nature Conservancy Council Handbook for the Preparation of Management Plans (NCC 1983). The UK approach differed in that it was concerned with specifying the limits for the condition of features, beyond which management intervention becomes necessary. The situation is further complicated by the fact that the UK government agencies and NGOs use a version of Limits of Acceptable Change that has no formal definition. The only attempt at defining the UK version of Limits of Acceptable Change is contained in the Countryside Council for Wales publication 'A guide to the production of management plans for nature reserves and protected areas' (Alexander 1996). Much of the confusion arises because the definition of Limits of Acceptable Change varies depending on where the concept is being applied and by whom.

For the purpose of this planning guide, the term 'specified limits' will be used and the following definition will be applied:

> 'Specified limits define the degree to which the value of an attribute is allowed to fluctuate without creating any cause for concern.'

Specified limits were developed in recognition of the inherent dynamics and cyclical change in populations and communities, and in acknowledgement of the fact that such variation is often acceptable in conservation terms. In reality, there are very few features for which the inherent fluctuations are fully understood. For a population, the lower limit might be the threshold beyond which that population will cease to be viable. However, even if the viability threshold is known, it is at best incautious and at worst foolhardy to set a lower limit close to the point of possible extinction. The upper limit could be the point at which a population might begin to threaten another important feature, or where a population becomes so large that it risks compromising the habitat that supports it. In many cases, upper limits may be unnecessary. In many ways, specified limits can be regarded as limits of confidence. When the value of all attributes falls within the specified limits, we can be confident that the feature is in a favourable condition, and, provided all factors are within their operational limits, we can conclude that the feature is favourable.

It is important to remember that the identification of specified limits will always require a degree of judgement. Firstly, it is rare to have robust empirical datasets that show the inherent variability of features, from which specified limits can be directly derived. The best that can be done in many cases is to set limits using expert judgement (expert in terms of the feature generally and in terms of knowledge of the site), backed up by some form of peer review and corporate ownership gained through the management planning approval process. Conservation objectives are fundamentally about what we **want** on sites, not necessarily what we **have got**, so the specified limits are primarily value judgements rather than scientifically derived figures.

**What happens when a limit is exceeded?**

Attributes represent part of the evidence that we require in order to judge whether or not we are meeting our objective for a feature. Taken alone, the values of the attributes describe the condition of a feature: they can tell us whether it is acceptable or otherwise. For the condition of a feature to be considered favourable, the values of <u>all</u> the attributes must fall within the specified limits. However, for a feature to be considered unfavourable, only

one limit need be exceeded. When this happens, the following procedure should be adopted:

1. Check the monitoring project and the data collected to ensure that there are no errors. If everything is in order proceed to the next step. If not, amend the monitoring project.

2. If a change has taken place and the limit has been exceeded, find out why the change has occurred. Changes happen because of the impact of a factor, or factors, or the lack of appropriate management. Where the factors, or failure of management, are known, carry out remedial management to deal with the factor, or improve existing management.

3. When a change has taken place and the reason is unknown, establish a research project to identify the cause.

4. Don't forget the precautionary principle: you do not need conclusive scientific proof in order to take an action to protect a feature.

**Example of an objective with Performance Indicators.**
Please note; this is the example given at the beginning of the section on objective, it is now reproduced with the performance indicators.

**Objective for an upland acidic oak woodland NNR**

Woodland will cover the entire site, and it will be maintained as far as possible by natural processes. A changing or dynamic patchwork of temporary glades will ensure that up to a quarter of the woodland canopy is open at any time.

The trees and shrubs will be mainly locally native broadleaved species, such as sessile or hybrid oak, downy or pendulous birch, ash, rowan, holly, elm, and hazel. Occasional beech, sycamore and conifer species will be tolerated but they will not become dominant in the canopy or the shrub layer. The abundance of individual species and tree density will vary throughout the woodland. There may be dense stands of one species or mixtures of several species occupying a given area at any one time.

The woodland will contain trees and shrubs of all ages and sizes, as mixtures or in single aged groups. Plentiful tree seedlings throughout the site will develop into saplings in the open glades. There will be abundant dead and dying trees with holes and hollows, rot columns, torn off limbs and rotten branches, while some will be partially or completely hollow. Throughout the site, fallen dead wood, ranging from whole trees to small branches, will be dense enough to obstruct walkers in areas away from the paths. This will provide a variety of habitats for dead wood dependent species of moss, liverwort and fungi, and for specialised invertebrates that depend upon dead wood at some stage of their lifecycle.

The field and ground layers will be a patchwork, including areas dominated by heather, or bilberry, or a mixture of the two, areas dominated by tussocks of wavy hair grass or purple moor grass, and others dominated by brown bent grass and sweet vernal grass with abundant bluebells. There will also be quite heavily grazed areas of more grassy vegetation. The field layer will be generally fairly rank and well developed, and this, together with the canopy, will help to maintain high humidity levels, which are crucial to survival of many mosses and liverworts. On rocky areas or areas of thin acidic soil, the ground layer will form an extensive, thick carpet of mosses and liverworts with few other plant species present.

Steep rock faces and boulder sides will be adorned with mosses and liverworts and filmy ferns. Patches of bare rock, where wefts of mosses or liverworts have peeled away naturally, will provide opportunities for re-colonisation. Similar processes will occur on living tree trunks and large branches, and on fallen timber in the more humid areas.

The lichen flora will vary naturally depending upon the chemical properties of the rock and tree trunks within the woodland. Trees with lungwort and associated species will be fairly common, especially on the well-lit woodland margins.

The varied structure of the woodland will improve the diversity of lower plant flora (i.e. mosses, liverworts, lichens and fungi), which will benefit from the range of habitats and niches provided. This varied structure will also provide the diversity of shelter and food to support populations of birds, including pied flycatchers, redstart and wood warblers, and mammals including several bat species, pine marten, otter and badger.

**PERFORMANCE INDICATORS**

**Attributes with specified limits:**

1. Extent of the woodland (see map)
   - *Upper limit* 150 Ha
   - *Lower limit* 135 Ha

2. Canopy cover, (within the woodland area).
   - *Upper limit* Canopy cover 90%
   - *Lower limit* Canopy cover 75%

3. Canopy gap creation rate.
   - *Upper limit* Canopy gap creation rate 0.5% per annum
   - *Lower limit* Canopy gap creation rate 0.25% per annum

4. Natural regeneration of canopy trees (in gaps)
   - *Upper limit* not required
   - *Lower limit* 2 viable saplings per 0.01 Ha of gap.

5. Species composition of the canopy
   - *Upper limit* Locally native spp with 80% oak
   - *Lower limit* 90% locally native spp with 60% oak

6. The volume of dead wood (fallen trees and branches, dead branches on living trees, and standing dead trees).
   - Upper limit *not required*
   - *Lower limit* 30 cubic metres per hectare.

**Factors withoperational limits:**

1. Rhododendron.
   - Upper limit *No flowering rhododendron*
   - Lower limit *not required*

2. Sycamore.
   - *Upper limit* 5% of the canopy
   - *Lower limit* not required

3. Grazing by sheep.
   - *Upper limit* 0.5 sheep per Ha
   - *Lower limit* 0.25 sheep per Ha

**Monitoring attributes**

Whenever attributes are identified they must be monitored: that is their purpose. The monitoring of attributes provides evidence that is used in the assessment of the conservation status of the features. However, determining that attributes are within their specified limits (indicating Favourable Condition) must **not** be taken as conclusive evidence that a feature is at FCS. The factors must also be within operational limits.

Monitoring, according to common use, seems to mean almost any kind of measurement including survey, census and even research. In fact, it has such a broad range of meanings that it is almost useless for planning purposes. It is not the intention of this guide to lay claim to the word, but in order to ensure that it is applied in the manner required by this planning process, a definition is required.

There are two definitions that meet our requirements:

**Monitoring is the making of observations with sufficient precision to determine whether a required condition is being met** (CCW 1996).

**Monitoring: surveillance undertaken to ensure that formulated standards are being maintained** (JNCC, 1998, A statement on common standards monitoring).

These both carry much the same meaning.

Monitoring is a huge subject, and it is beyond the scope of this document to do much more than underline the essential relationship between monitoring and planning – there can be no monitoring without planning, and no planning without monitoring. It is a bold statement, but can be easily justified. If we do not monitor, we will never be in a position to know that the features are in the condition that we require, and we will have no means of knowing that management is appropriate. It is the planning process that determines the condition we require for the features, and, unless we know what we want, we cannot monitor.

The effort expended on monitoring will, of necessity, be dependent on how concerned we are about the conditions of a feature. There is no point in expending a lot of effort monitoring features that are clearly unfavourable or clearly favourable. In either of these instances, we do not require much proof to make a decision so detailed sampling is not necessary; a quick walk through, drive through or flight over will suffice.

The greatest amount of monitoring effort will be needed where we have least confidence in our ability to judge the condition of the feature, and some form of sampling will be required. However, even here, it should be possible to target sampling at certain areas of the site and so reduce the total effort required.

For example:

- When the condition of a feature is satisfactory we can sample the most vulnerable areas. If these are satisfactory then we may conclude that the remainder of the feature is probably satisfactory.

- When the condition of a feature is unsatisfactory we sample those parts where recovery, through management, is most likely. If these areas do not recover we may conclude that the remainder of the feature will also fail to recover. If these areas recover we cannot conclude that the remainder will recover.

- When we have evidence that suggests that the condition of a feature is recovering we could sample those areas least likely to recover. If these recover then it is reasonable to assume that the remainder has also recovered.

In each case, we are making presumptions based on good, but limited, evidence. We are, to some extent, gambling since we can never be certain that our presumptions are true. Try to keep things as simple as possible. When in doubt about the validity of the monitoring protocol, or uncertain about the statistical basis for sampling, consult the literature, or, better still, a statistician.

## Planning monitoring projects

**Recommended structure for monitoring projects** (D Wheeler 1997)

**General:** The following series of headings is intended to provide a standard structure for planning a monitoring project. Although the structure is designed specifically for use with CMS, it could equally be used for non-CMS based projects. However, in the case of non-CMS based projects, it will be useful to include additional information, i.e. relevant feature objective, outline of management, personnel undertaking work, costs etc. This information is referenced by default in CMS.

Important: The project plan should provide sufficient detail for the person actually undertaking the work of the project, e.g. a contractor or future project officer, to complete the project without reference to the original author.

**1. Feature/s or Factor/s:** Identify the feature/s, or, in the case of operational limits, factor/s, to be monitored.

**2. Performance indicator/s:** Identify the performance indicator(s) of the feature or factor to be monitored.

**3. General background/bibliography:** Note any relevant background information, including references to standard techniques that are described elsewhere.

**4. Methodology:**
a) Equipment: List all equipment, noting any detailed specifications and location of equipment, if appropriate.

If you intend to use an obscure piece of equipment, provide a reference to bibliographic material describing equipment in detail.

b) Location of sample collection: Define the area of sample collection, referring to fixed points on site and on an accompanying map.

c) Fixed-point markers: Describe the type of marker and location of each marker. Describe any programme of maintenance for fixed-point markers. Some projects may demand an extensive system of markers. A completely separate project may be required to plan and record maintenance.

d) Sampling technique: Describe the technique used for collecting sample data, referring to use of equipment etc. Include sufficient detail to facilitate repetition by others.

e) Unit of measurement: Identify units, for example, the total number of animals in a population or the number of animals along a transect.

f) Sampling period: State the time period within which the set of sample data is collected. This will usually be a period within a calendar year, e.g. May - July.

g) Frequency of sampling during sampling period: State the interval between sampling during each sampling period.

h) Number of samples collected during sampling period: State the number of samples to be collected during each sampling period.

i) Repeat interval: State the interval between sampling periods.

J) Special considerations: Note any other factors that affect data collection, for example limitations imposed by weather conditions.

**5. Data management**

a) Identification of data format: State the format of stored data (paper report/computerised etc.). In the case of computerised data, note the type and name of the software and the version e.g. Spreadsheet, Quattro Pro, Version 6.0.

b) Location of data: Note location of original data.

c) Data security: Monitoring data are irreplaceable. Note the location of all copies of data.

d) Analytical technique: Note the method of data analysis. Refer to statistical techniques etc.

**6. Reporting/circulation of reports:** Define report interval, report content. State circulation list for reports.

## 4.3 Conservation Status and Rationale

**Presentation**
As with section 5 of the management plan, we are still considering each feature (or aggregated group of features) 'x' separately:

4.3.x.1 Assessment of conservation status
4.3.x.2 Rationale & Management Projects
- 4.3.x.2.1 Rationale
- 4.3.x.2.2 Management Projects

### 4.3.1 Conservation status

*This section was prepared by Adam Cole King, CCW, for the 2002 CCW planning guide.*

The purpose of performance indicators as described in the preceding section is to enable monitoring to be carried out which, in turn, enables judgements to be made about whether or not the conservation objectives are being met.

Having defined our objectives and performance indicators and having carried out the necessary monitoring, we should be in a position to make judgements about the conservation status of the feature and more particularly how, if at all, we need to review the management of the site. The conservation status of a feature will have significant implications for management. When we know that a feature has been maintained, for some time, at FCS the probable implication is that management is appropriate. Conversely, when a feature is unfavourable and declining management must be considered inappropriate. This relationship between the conservation status of a feature and the quality of management is an essential starting point when deciding on what management is most appropriate for a feature.

This section of the management plan should describe the current status of a feature and outline the evidence which led to that conclusion. The following Table gives the various “categories of response”, each of which should be selected according to the assessment of the status of the feature, which, in turn, is derived from the results of monitoring the performance indicators (factors and attributes). The response category then provides the starting point for the management rationale section of the plan.

| Assessment of conservation status[2] | | | Management response category[3] |
|---|---|---|---|
| | **Current** | **Comparison with previous assessment** | |
| 1 | Both attributes and factors are within limits, and… | …(a) attributes were within limits at last visit | no change to management is required |
| | | …(b) attributes were outside limits at last visit | change in management may be required since management that has been in place to restore condition may not be appropriate for maintaining it |
| | | …(c) there is no previous assessment | no change to management is required |
| 2 | attributes are within limits but factors are outside limits, and… | …(a) factors were outside limits at last visit | factors may in fact be OK and limits may need to be reviewed |
| | | …(b) both attributes and factors were within limits at last visit | we can expect condition to deteriorate and therefore management to bring factors back within limits is required |
| | | …(c) there is no previous assessment | we can expect condition to deteriorate and therefore management to bring factors back within limits is required |
| 3 | attributes are outside limits but factors are within limits, and… | …(a) attributes were outside limits at last visit as well, but… | …we can still expect condition to recover under these factors, so maintain current management |
| | | | …condition ought to be showing signs of recovery by now and therefore management should be changed |
| | | …(b) attributes were within limits at last visit | condition has deteriorated and changes to management are required (i.e. limits for factors are inappropriate, or new factors have arisen) |
| | | …(c) there is no previous assessment | We expect condition to recover under current management |
| 4 | Both attributes and factors are outside limits, and… | …(a) Recovery is possible if factors can be brought under control | Changes to management are required |
| | | …(b) Recovery of part of the feature is possible if factors can be brought under control | |
| | | …(c) there is no prospect of recovery | Abandon feature |
| 5 | Attributes within limits, factors not assessed | | No basis on which to change management[4] |
| 6 | Attributes outside limits, factors not assessed | | No information on which to change management[3] |
| 7 | Attributes not assessed, but factors within limits | | No basis on which to change management[3] |
| 8 | Attributes not assessed, factor outside limits | | Management required to bring factors back within limits[3] |
| 9 | Attributes and factors not assessed | | No basis on which to change management[3] |

2. Note that categorising conservation status (and condition) as "favourable" or "unfavourable", though necessary for reporting purposes, is less important in the site management context that understanding the direction of change of the feature, and making judgements about the causes of that change. Each of the options 1-9 will have a corresponding reporting category for both condition and conservation status. Development of guidance on this is required.

3. These categories provide the starting point for the "Management rationale" section of the management plan (section 5.2).

4. Measures to enable assessment must be put in place as soon as possible.

### 4.3.2 Rationale

The management rationale section of the plan is concerned with identifying and describing, in outline, the management considered necessary to meet the management objectives. This could be to maintain or restore the features to FCS.

The procedure follows directly on from the previous section, beginning by considering the status of the feature, both its condition and the factors affecting it, and the implications for management. Obviously, we will have some confidence in current management when the feature is considered to be in a favourable conservation status and little confidence when it is not.

Management is invariably about controlling factors. By control, we mean the removal, maintenance, adjustment or application of factors, either directly or indirectly. For example, grazing is an obvious factor for grassland habitats. We can remove grazing, reduce grazing, maintain current levels, increase grazing or introduce grazing.

It is essential to consider the relationship between the factors and the condition of the feature. For example, for features in unfavourable condition (i.e. attributes are outside specified limits) we should ask what factors are responsible for this unsatisfactory situation, and how might they be controlled. Similarly, if the feature is in a favourable condition (i.e. attributes are within specified limits) but the factors are not under control (i.e. outside their operational limits), we need to consider what the likely effect on the feature will be, and how that factor can be brought under control.

In some cases, it may not be possible to conclude with any certainty what the management should be. The only approach is to seek evidence from other sites, search the scientific and conservation management literature, obtain advice from experts and then follow the adaptable management process. If serious doubts remain, run a trial or an experiment. If the outcome is acceptable, continue; if not, modify the approach or try something different. As outlined in the preamble to this guidance, management is adaptable; we learn through experience, or the experience of others, what the most effective and efficient management may be at any given time.

For example, consider once again the grassland that we wish to maintain. Either too little or too much grazing will have a negative impact. Therefore, we need, as far as possible, to define the levels of grazing, both the least that is required and the most that can be tolerated. The best way of determining the appropriate grazing level, when this is unknown, is to recognise that the most important reference point is the condition that we want for the vegetation, i.e. the objective. We should begin by obtaining the best advice and guidance available from experts or from the relevant literature. Then we should vary grazing practices until the required condition is met and maintained.

We must also remember that the effect of factors can change with time. Climate change is a very good example: management activities considered currently appropriate today might be completely inappropriate in the future.

There are many factors beyond the control of site managers. These may include direct impacts from distant sources such as atmospheric pollution, or

the interruption of water or sediment supply. Factors that cannot be tackled due to inadequacies in the legislation, or because of competing legislation, must also be identified. Some factors may be beyond out ability to control at the present time, but, as an initial management response to an unfavourable conservation status assessment, we may be able to modify the way we control other factors to offset the negative effects. For example, if a feature relies on open sand dune habitats for survival and there is negligible sand accretion on the site, then it may be necessary to create open sand as part of a holding operation until natural dynamism can be restored to the system. In all such cases, it is important to communicate with those who could influence this factor.

### 4.3.3 Management projects

This section is a continuation of the rationale. So far in the rationale, the need for, and the nature of, possible management has been discussed. The outcome should be an outline of the management processes considered most appropriate to safeguard the feature.

The function of this section of the plan is to describe in detail all the management work that we need to carry out on the site.

**Planning individual projects.**

The rationale described in the proceeding section provides an outline description of the management work required to meet the objective. The next step, in order that work programmes may be prepared, is to consider the detail required under the various project headings. It is important that the following areas are given attention:

| | |
|---|---|
| When | When will the work be carried out and for how long? |
| Where | Where on the site will activities take place? |
| Who | Who will do the work and how much time will be required? |
| Priority | What priority is given to the project? |
| Expenditure | How much will the work cost? |
| Equipment | Does the project require any special equipment? |

In addition, the following headings should be used for each management project plan:

**Purpose:** Explain why the particular project is being carried out.

**General background:** Provide any relevant information concerning the background to the project, for example, development work leading to adoption of the current methodology.

**Methodology:** Provide sufficient guidance to enable anyone required to carry out the work to do so without needing to refer to any other instruction. Provide clear, succinct instructions. A series of points is usually more useful than large blocks of text.

**Programme:** Set out the work programme. When work is phased over a period, describe each stage leading to the completion of the project.

**Project codes and titles**
A project is a clearly defined unit of work. The CMS system uses standardised project codes and titles to describe these areas of work. These codes are managed on behalf of users by the CMS Partnership, and reviewed on a regular basis. The coding system provides a common language for managing projects, enabling data sharing within and between organisations.

Each standard project code contains two letters and two digits, and has an associated title. Managers then add a site-specific number and 'qualifying phrase', allowing each project to be individually identified.

A full checklist of project codes, along with guidance on their selection, is provided in the appendices.

# 5 OTHER FEATURES OF INTEREST

*IMPORTANT: DO NOT INCLUDE THIS SECTION IF THERE ARE NO ADDITIONAL FEATURES ON THE SITE.*

*THIS SECTION FOLLOWS EXACTLY THE PROCESS SET OUT FOR NATURE CONSERVATION FEATURES. PLEASE REFER TO THE PRECEDING SECTION OF THE GUIDE.*

## Identification/confirmation of features

Sites are selected for protection because they contain one or more important features. In addition to the nature conservation features, there will be several other areas of interest. These include earth science and archaeology.

The main purpose of this section is to provide a list of the important or significant features, and to confirm their status.

### List of recognised features

In most cases, the presence of the important features on a site will have been the basis of site acquisition, selection or designation. This means that at some time in the past the site has been evaluated, and that the features so identified should be given some degree of priority. The status of the features will be determined by the policies of the organisation responsible for the site. These policies are often dictated by legal and other obligations, for example, compliance with national or international laws and agreements. It is essential that the significance of the present legal status of the features is given adequate attention.

In all cases where the features have been identified, the process required in this section is to examine each in turn and to confirm the status of the feature. Consideration must also be given to the fact that features currently considered important might have been missed at an earlier time. Any additional features will be dealt with in the next section.

*FROM THIS POINT ON, TREAT ADDITIONAL FEATURES AS IF THEY WERE NATURE CONSERVATION FEATURES. USE EXACTLY THE SAME PROCESS, BUT ADJUST THE CONTENTS OF THE SECTIONS TO SUIT THE PARTICULAR FEATURE.*

# 6 LANDSCAPE & WILDERNESS VALUES

Landscape and wilderness qualities are often overlooked in management plans. There is a considerable range of publications dealing with landscape planning. This guide does not seek to contradict or replicate any of the guidance available elsewhere.

For sites where habitat management and maintenance is important, and there are few man made structures, the management of the habitat will usually also cover most landscape issues. For most natural protected areas, landscape management will invariably be concerned with minimising, or removing, the influence of man.

It is in western countries with a long history of cultural and contrived landscape that landscape planning and management is a major issue. When dealing with such sites, resort to the wealth of documentation that is readily available.

In the case of sites where there are significant anthropogenic artefacts with historical, cultural or religious values, these should also be protected. They could be included in the landscape section. However, the protection and maintenance of these is probably best achieved by regarding them as features of interest and dealing with them as any other feature.

**Description**
As with all sections of the plan the description is held in section 3.

## 6.1 Evaluation

Any appreciation or evaluation of landscape will be based almost entirely on human values. This section requires a holistic approach; when considering landscape the sum of the parts is usually considerably less than the whole.

The purpose of this section, landscape evaluation, is to place a relative value on both the landscape as a whole and also on individual features within the landscape. This is a subjective process where personal opinions and taste will influence decisions. Wherever possible, use supporting evidence, for example, legal status or any statements made by informed or expert individuals. Begin with an overview of the entire site and then move on to specific features. Consider the site within the context of the surrounding area, as seen from a distance and also as perceived from within.

An important component of the evaluation is the identification and description of all intrusive artefacts, for example, inappropriate or misplaced buildings and other structures, power lines, rubbish tips, old abandoned vehicles and machinery, non-essential fence lines, over-large or otherwise inappropriate footpaths, tracks and roadways.

## 6.2 Objectives for landscape & Wilderness values

### 6.2.1 Management objective

The purpose of this section is to convey an impression, or vision, of the site in the condition that we require. This could be to maintain a current and acceptable state or it could be the end product of restoration. In other words, it portrays the condition that should prevail when the landscape objective has been met. It may also be possible to describe the various transitional stages that can be expected on route towards meeting the objectives. The section can be presented as a block of text, but any approach that relies on graphics or mixed media is more likely to convey a vision than plain text.

For most natural areas, habitat management and protection is taken care of by the objectives for habitats. There is little purpose in replicating statements on the condition of the habitats in the landscape objective. Where historical or cultural artefacts are also recognised as an important component of the landscape this can be dealt with separately. Therefore, excepting valued cultural components, landscape objectives for natural areas will be concerned with removing or minimising the impact of inappropriate anthropogenic influences and, in particular, ensuring that conservation and infrastructure management activities do not compromise the landscape values. In areas of outstanding landscape and wilderness quality, these considerations will take precedence over most other considerations.

An example of a landscape objective could be:

To restore, and thereafter maintain, the outstanding natural landscape and wilderness qualities of the entire site at favourable status.

This says everything and nothing. It is perhaps an overriding principle that should be applied to all protected areas. We clearly need to go further, and the guidance given for conservation features is equally relevant here. Create a portrait, in words or graphics, of what the site should look like, paying particular attention to excluding undesirable artefacts.

### 6.2.2 Performance indicators/compliance monitoring

It is not an easy task to select performance indicators that will measure overall landscape quality. Each important habitat or cultural feature should be dealt with as a feature, if this is the case they will be monitored in their own right.

Performance indicators and in particular the attributes for natural features have been dealt with under the section on nature conservation features of interest. Factors as performance indicators will also be associated with the natural features.

If for any reason there are additional components in the landscape objective they must be also identified and monitored. An approach similar to the nature conservation features may be adopted.

In addition it will be necessary to ensure compliance with any remedial actions identified in the plan and aimed at improving or maintaining the landscape are monitored. This is compliance monitoring or recording.

## 6.3 Landscape status & rationale

### 6.3.1 Status and Rationale

The rationale is concerned with identifying and describing, in outline, the management considered necessary to maintain the landscape in (or restore it to) a favourable status. The status of a feature is the difference between what we want and what we have got. There is no landscape version of FCS so the approach used for establishing status for landscape features is not as clearly defined. To complete this section, take the conditions that are defined by the preceding objective, visit the site and note any differences between the required state and the current state. This will help you to identify any remedial works that may be required.

Landscape management must, at least in the first instance, be concerned with removing, or at least minimising, all unacceptable intrusions that are a consequence of inappropriate site management, past and present.

**Implications for future management**

A clear landscape or wilderness objective will have implications for all infrastructure, and occasionally habitat, management on a site.

Whenever the inclusion of management infrastructure is essential and unavoidable, consideration must be given to minimising the impact and avoiding compromising the landscape or wilderness objective. This could be achieved by, for example, careful positioning and screening with trees or shrubs. New building design should be consistent with local vernacular style, and roads and tracks should, as far as possible, follow contours.

In general, all future constructions, roadways and other infrastructure requirements should be designed to meet the minimum requirement necessary to fulfil their function.

One of the factors that will impact on the landscape and wilderness values of a protected area is the need to encourage visitors to the site. The management of visitors and tourists will be discussed in the appropriate section. However, it is important that the impact of visitors and provisions for accommodating them take full account of the landscape objective.

### 6.3.2 Management projects

This section is a continuation of the rationale. So far, the need for, and the nature of, possible management have been discussed. The outcome should be an outline of the management considered most appropriate to restore and maintain the landscape values.

The function of this section is to describe in detail all the management work that we need to carry out.

**Planning individual projects**

For full details of how to complete this section, please refer to the main sections on planning project. All project plans will follow a similar pattern, regardless of where they occur in the plan.

# 7 STAKEHOLDERS

This guide is not written for any particular country or part of the world. Readers in the developed world and in particular Britain will realise that much of the following has been written with the developing world in mind. Most of the contents are relevant everywhere but, as with all sections of the plan, use anything that is relevant and exclude or modify anything else.

This is an essential section in any plan. The first issue is a definition of stakeholders, including local communities. Who are the stakeholders and how local is local? Take a common sense approach, and include any individual, group, or community living within the influence of the site, and any individual, group or community likely to influence the management of the site.

The second issue is a definition of community. There will rarely be one single, clearly identifiable community. Individuals can be part of several different communities. A simplistic view of communities will regard spatial boundaries as the only definition. However, even within a clearly defined area there can be several quite distinct communities, often overlapping. For example, religious divisions often exist within a community. Other divisions will include age, occupation and political inclination. These sections are sometimes in conflict, and may not agree on all issues. This means, of course, that from a site manager's perspective it will rarely, if ever, be possible to obtain the approval of everyone.

For isolated, remote sites where there are few, if any, people, and little external interest, this section can be dealt with in a few paragraphs, but for some sites with large resident populations, or sites surrounded by densely populated areas, this section can be larger than the rest of the plan. As is the case for all sections in the plan, this section should be as large as it needs to be and no larger.

**Consultation**

Stakeholder and community interests can have considerable implications for site management, and can impose significant obligations on the site manager. Public interest, at all levels, must be taken into account. The planner must recognise that other people may have many different, and sometimes opposing, interests in the site. It is essential that these interests are safeguarded wherever possible. There may be a justifiable need for compromise, providing, of course, that the prime objectives of management are not jeopardised. Sites are never isolated from their surroundings; it is usually only possible to safeguard them with the co-operation of others.

Maintaining communication and, whenever necessary, consultation with stakeholders is essential, at the very least to keep them informed of any developments that may affect them. Conservation management must be inclusive; sites, habitats and species cannot survive in isolation. Difficulties may arise in trying to decide the point at which consultation should begin. It is often necessary to collect information before embarking on the preparation of a management plan; this must not be confused with consultation. Consultation and negotiation should be about presenting ideas or proposals for discussion and seeking views about specific issues. A structured planning process should generate ideas and proposals. Unfocused discussion is rarely conclusive and can be counterproductive. Attending a meeting with

stakeholders without knowing what you want, or what you intend to do, will create a bad impression. Before any consultation, we must know what we are trying to achieve, define the areas not open to negotiation, and, for issues open to discussion, at least offer a range of well-considered options.

This section is included at this stage in the planning process to emphasise the point that site managers should not begin to consult until they have identified their conservation objectives. While it may not be possible or desirable to compromise conservation objectives, it is often possible to modify a management process. In short, perhaps conservationists need to be concerned with obtaining their objectives, but should recognise that there can be many different approaches to achieving the same result.

In order to safeguard wildlife successfully, conservation managers need to adopt a flexible approach that will allow them to respond to the legitimate interests of others, to adapt to the ever-changing political climate, to accommodate uncertain and variable resources, and to survive the vagaries of the natural world.

**Further reading**

There are many guides and publications that deal with stakeholder involvement and consultation. The two most recent and useful are:

Guidelines for Management Planning of Protected Areas, Lee Thomas and Julie Middleton IUCN 2003.

Management planning guidance - Management planning for protected areas - a guide for practitioners & their bosses, Eurosite 2004

**Description**

As with all sections of the guide the description is held in section 3 of the plan.

## 7.1 Evaluation

The evaluation in this section is concerned with establishing the extent to which resources and time should be devoted to obtaining and maintaining good public relationships. The evaluation should begin with an assessment of the extent to which local people interact with the site. Interaction can include a wide range of legitimate, and occasionally illegal, activities, for example, recreation and grazing domestic stock.

For very remote sites, where there is little, if any, significant contact with local people, there is no justification for expending time and money attempting to build relationships with a non-existent public. Conversely, for sites with large resident populations, or with large populations in the immediate surroundings, an ability to maintain good relationships with the local communities and other stakeholders will be one of the most important considerations. Be careful. Even the management and protection of very remote sites can be seriously jeopardised by a very small number of people intent on pursuing damaging, often illegal, activities.

What opportunities are there to obtain benefits for the site and its wildlife by improving community relationships?

How can local people benefit from the presence of the site?

**Criteria For evaluation**

The evaluation can be guided and structured by using the following criteria as a series of prompts for discussion. Use any that are relevant, discard any that are irrelevant and use additional criteria if the list is incomplete. Don't forget that evaluation is a discussion leading to a conclusion, and not simply an extension of the description.

**Communication:** This can be a serious problem, and is often complicated in areas where local minority languages are in use. It may be that staff will have to learn local languages.

**Dispersal and accessibility:** Communities in remote rural areas can be extremely dispersed, and not easily accessible.

**Legal and traditional rights:** Local people may possess a range of legal rights, for example the right to graze animals. Sometimes there are traditional, well-established practices that may be damaging, and are occasionally illegal.

**Provision of employment:** There should, whenever possible, be an obligation to provide employment and other opportunities for local people. This is one way in which a site can make a very significant contribution to a local community. There will often be considerable benefits for the site.

**Conflicts of interest within communities:** Conflicting interests within a community can also be a serious issue. For example, one group may be able to benefit from tourism, while another may be prevented from carrying out what they consider to be legitimate activities.

**Availability of traditional skills:** Site management is often reliant on traditional or local management practices. The necessary skills are often available within the local populations.

**Volunteers:** On many sites, volunteers, individuals or local support groups can make a significant contribution to management.

**Environmental education:** Reserve managers should make a contribution towards providing environmental education, at least for local children. This can result in significant local, and wider, benefits for conservation and environmental issues, but can be very demanding on staff time and other resources.

**People as negative influences**

Conservation management is mainly, if not entirely, concerned with maintaining, controlling or removing the influence of people. We have been, and will continue to be, one of the most destructive forces that our planet has to contend with. Simply in order to survive, humanity has exploited wildlife. In the past, and occasionally even today, communities can live in harmony with their environment, but this is the exception and certainly not the rule. Conservationists can resort to the argument that, unless we protect our environment, our ability to survive in the long term is uncertain. However well we are able to present our case, and regardless of how good the case, it will fail to impress people who survive in conditions of poverty scraping a living by

utilising these areas, sometimes illegally. Sophisticated, wealthy, informed individuals, enjoying a privileged existence, must not assume any right to dictate to less advantaged people. If we want to maintain conservation areas, we must be prepared to pay for the privilege. The capacity to appreciate and enjoy wild places and wildlife, and not simply to regard them as an essential resource, is often restricted to individuals who do not have to depend on these areas for their livelihood. Those who suffer disadvantages as a consequence of conservation activities should be compensated and not persecuted, though, of course, these sentiments do not apply to wealthy enterprises intent on exploiting sites for commercial gain.

The obvious conclusion is that we must protect the few remaining wilderness areas, and we must maintain biodiversity on a global basis. This will mean preventing some people from carrying out what they regard as legitimate activities. Our obligation must be to provide compensation or alternative means of support. This already happens throughout the developed world. For example, in the UK there are several agri-environmental support schemes. This moral obligation needs to be recognised in all management plans.

## 7.2 Objectives for stakeholders

### 7.2.1 Management objective

Please refer to the text in the features section for a full guidance on writing objectives.

A policy for relationships with stakeholders and the local community could be:

To obtain levels of mutual understanding and co-operation with stakeholders that will optimise benefits for stakeholders and make a positive contribution towards protecting the site.

This is a good start but no more. When it is apparent that a statement could be applied more or less everywhere then it usually means that it is far too generic or non-specific to be of any real use anywhere.

An objective, in this context, is a description, or vision, of the ideal state for relationships with stakeholders. It may not be an obtainable state in the short term, but will provide a consistent direction for all developments in this area. The preceding evaluation should provide a structure and justification for the objective.

### 7.2.2 Performance indicators and monitoring

The approach used to identify performance indicators, (attributes and factors), in the section on nature conservation features is not applicable in this section.

It is not an easy task to select performance indicators that will measure the quality of relationships with stakeholders. One obvious approach is to identify a series of monitoring projects to ensure compliance with any management projects identified in the rationale.

For example, the rationale could identify the need to contribute towards the provision of environmental education in the local schools. This activity must be planned, and a compliance-monitoring project identified, to ensure that the work is carried out as required.

Monitoring compliance will tell us that a planned action has taken place, but it will not enable any evaluation of how effective the action has been towards meeting our objective of improving relationships with the community. It should, however, be possible to make direct, though possibly subjective, measurements. For example, it may be possible to gauge stakeholder opinion by recording the number of complaints or compliments received and noting any trends. Informal liaison will provide a proactive approach. It may even be appropriate in some circumstances to use formal interview or questionnaire techniques.

## 7.3 Status and Rationale

### 7.3.1 Status

The first step in the rationale is to consider the implications of status. Status is quite simply the difference between what we want and what we have got. If relationships are excellent, where excellent is defined by the objective, then any current management activities are probably appropriate. Conversely, if relationships are poor a change of management is required.

### 7.3.2 Rationale

The rationale is concerned with identifying and describing, in outline, the management activities considered necessary to obtain and maintain an appropriate relationship with stakeholders. Management activities may include, for example, liaison, provision of environmental education, consultation, compensation and direct aid.

### 7.3.3 Management projects

This section is a continuation of the rationale in which the need for, and the nature of, possible management has been discussed. The outcome should be an outline of the management considered most appropriate to obtain and maintain a good relationship with stakeholders.

The function of this section is to describe in detail all the management work that we need to carry out.

**Planning individual projects.**

For full details of how to complete this section, please refer to section 4.2.2. Project descriptions will follow a similar pattern, regardless of where they occur in the plan.

# 8 ACCESS & TOURISM

**Introduction**

Provisions for visitors and tourists are often one of the most important functions of a reserve, and, consequently, must be given adequate attention in the management plan.

Public access and tourism, in the context of this document, is applied in its widest meaning, and includes anyone who visits the site for any reason other than for official purposes.

Access is important for very many reasons, not least because the revenue from entry fees, accommodation and sales can make a significant contribution towards the costs of managing a site. Reserves can also attract significant numbers of visitors to an area, which may be of considerable benefit to the local, and even national, economy.

The provision of access will provide opportunities for site mangers to influence visitors and, through interpretation, offer insights that provoke interest, promote understanding and foster feelings of care for the site and our environment in general.

There is also negative side, whereby access and tourism can have a detrimental impact on a site, its wildlife and wilderness qualities. Care must be taken to ensure that our obligation to protecting wildlife and wilderness is not compromised through inappropriate people management. There are far too many examples of overexploitation, where both the wildlife and the quality of the visitors' experience has been seriously diminished.

The educational use of a site is often very important, occasionally so important that a separate education plan should be included. This is a specialised area and specific guidance for the production of these plans should be sought. For small sites, or for sites where the provision of educational opportunities is not regarded as a priority, limited provisions for education can be included in this section of the plan.

In conclusion, there should be a strong and positive presumption in favour of providing access and appropriate facilities for visitors to all sites, in so far as these activities are compatible with maintaining the nature conservation values, the site fabric and infrastructure.

**Description**

As with all sections of the plan the description is held in section 3 of the guide. There is no need to repeat the description in this section.

**Policy**

Management planning is always guided by policy. The policy section should contain all site policies. However, given the significance of policy to access, the need for access policies is highlighted here. This information can be held in the general policy section and, in some circumstances, repeated here. It will contain the access policies of the organisation responsible for managing the site.

The following is an example of an access policy adopted by a UK government agency.

We will encourage the sustainable public use of reserves in so far as such use:

- is consistent with our duty to maintain or restore the nature conservation to Favourable Conservation Status
- does not expose visitors to any significant hazards

All legitimate and lawful activities will be permitted in so far as these activities:

- are consistent with our duty to maintain or restore the nature conservation to Favourable Conservation Status
- do not expose visitors to any significant hazards
- do not diminish the enjoyment of other visitors to the site

**Access zones**

Access objectives will often vary across a site; some parts may be suitable for access while others are unsafe or fragile. It is, therefore, important in these instances that the reserve is divided into zones. The delineation and description of visitor zones, along with an explanation outlining the basis for their selection, is required. This may be a difficult section to complete at this stage. Part of the analysis required in order to make decisions will be conducted at a later stage. The distribution of features of interest to visitors, the fragility of the site or parts of the site, the availability of paths, maintenance of landscape qualities, and many other factors, will influence the selection of visitor zones.

A full discussion that explores all the relevant factors contributing to the selection of the zones should be included. Levels of access may be identified for the whole site or zones within a site. For example, it would be quite reasonable to include total exclusion zones, controlled access zones and open access zones within an individual site.

I recommend that the discussion on zones is retained at this point for presentation purposes in the final plan, but that you may prefer to defer completion of the section until you have dealt with the management requirements.

## 8.1 Evaluation

The outcome of this section should be a clear statement of the appropriate level or degree of access to the site, or parts of the site. In other words, to what extent can or should the site be used to accommodate visitors? This is our objective for access.

Please note that the carrying capacity will be determined by the ability to protect the conservation, and any other important, features, and the point at which visitors become so aware of other visitors or their activities that the quality of their experience is diminished.

The evaluation will be based on the following list of generic criteria. This list is offered as guidance, and should not be taken as exhaustive. You should not feel obliged to consider any of these criteria if they are not relevant to your site, and you should include any additional criteria, not listed below, that are relevant.

**NOTE:** It is important to recognise that the criteria could also be used as factors later in the planning process.

**Features of interest on the site**

The following questions should be addressed:

What are the features of interest that attract, or potentially attract, visitors to the site?

Why do people visit the site and what do they expect to see or experience?

Does the site possess wilderness or landscape qualities?

Features of interest will include the recognised conservation features and other interesting features such as archaeology, geology and culture, and, in fact, anything that might attract visitors.

The seasonal nature of some features should be considered. For example, migratory species may be absent for periods.

**Recreational opportunities**

Are there any recreational opportunities, or reasons for not permitting recreational use of the site?

**Carrying capacity of the site features**

What is the carrying capacity of the site features? How much impact can they tolerate before being placed at risk?

**Carrying capacity of the site**

This is the level of access that can be accommodated without detracting from the quality of the experience. There will be two main areas of impact. Visitors can make a direct impact on the infrastructure, landscape and wilderness qualities of a site. For example, paths may become over-wide and unsightly, or wildlife may be disturbed and driven from viewing areas. Visitors can also visit sites in such numbers that they become a distraction to others. This is

particularly significant in areas that are considered important because of their wilderness appeal.

**Actual and potential demand**
How popular is the site with visitors, and how aware are they of the site? Could promotion or publicity increase interest and demand?

**Access and accessibility to the site**
How accessible is the site? Is it remote, near major road networks, etc.? This will include any seasonal variations. For example, a site may not be accessible during the winter.

**Access within the site and suitability of the infrastructure (paths, tracks, accommodation and any other facilities)**
How easily can visitors gain access within the site? The infrastructure is included in the description. At this stage, consideration is given to its suitability, or otherwise, for visitors, bearing in mind that facilities can be improved.

**Site hazards (dangerous terrain, etc.)**
Identify all potential dangers or threats on the site. Consider any implications for the health and safety of the visitors.

**Potential conflict with other similar provisions, and opportunities for working with other providers**
The purpose of this section is to ensure that there are no conflicts as a consequence of duplicating facilities provided by others. This is not to suggest that duplication is always to be avoided. If the demand is sufficient to meet more than one provider there should be no problem. It is also important that opportunities for working with others are considered. For example, it may be possible to combine with others to provide a wider range of opportunities for visitors and thus enhance the ability to attract a larger audience.

**Stakeholder interests, rights and expectations**
This extends the discussion to consider the expectations and aspirations of all stakeholders. For example, some stakeholders may benefit but others will be adversely affected as a consequence of increased tourist activity.

**Availability of resources**
The level of resources available, or anticipated, will almost always be a consideration. Resources will, above all, limit the extent to which provisions can be made for visitors. For situations where resources are fixed, consider resource constraints in this section, and, even at this stage, limit the provisions to those that can be afforded. However, one of the functions of a management plan is to act as a bidding document.

**Access options.**
The evaluation process, in addition to developing an access objective for the site, can also identify management options that can be applied to the entire site or part of a site. The following range of access options could be used:

1. Open access for any legal activity
2. Open access for quiet enjoyment and controlled activities
3. Open access for quiet enjoyment only
4. Access limited to rights of way, courtesy paths and facilities

5. Access limited to rights of way.
6. No access

These options can help with the development of an objective.

## 8.2 Objective for access and tourism

### 8.2.1 Management Objective

We have now reached the point where the most important decisions have been made. The purpose of this section is to present an objective which is based on the preceding discussion. When preparing the objective please refer to the general guidance given in the nature conservation section and, above all, remember that it is important that you use plain language. The structure of the objective should be guided by the rationale.

### 8.2.2 Performance indicators & monitoring

The approach used to identify performance indicators, (attributes and factors), in the section on nature conservation features is not applicable in this section.

Performance indicators for access need to be selected with care. They must be measurable, and data should be easy to collect. Keep the number of indicators to a minimum, but ensure that they provide sufficient evidence to enable the measurement of both the quantity and quality of the service provided. Every time a performance indicator is selected it must be quantified and a monitoring project developed.

The following list provides some suggestions:

**Quantity**

The total annual number of visitors, or a representative sample, for the whole, or part, of the site (This can be used to measure trends.)

The spatial distribution of use on a site

The seasonal distribution of visits

**Quality**

The number of repeat visits by individuals, or by a particular tour operator

Level of satisfaction measured informally by, for example, visitor books

Level of satisfaction measured formally by, for example, structured questionnaires

The number of complaints/compliments

## 8.3 Status & Rationale

### 8.3.1 Status

The status of access provisions is the difference between the current state and the required state, as defined by the objective. If there is a shortfall, ask

the question, why? Move on to consider the quality of the provisions currently on offer. Are they adequate or otherwise? The difference between the current condition and the required condition is a fundamental starting point. We can use terms such as favourable and unfavourable, but it is important to recognise that the definitions applied to these terms for reporting the status of conservation features cannot be used in this context.

### 8.3.2 Rationale

The rational is concerned with identifying all the work required to meet the access objective.

Our ability to attract, and provide for, appropriate numbers of visitors will be dependent on the combined impact of many factors. Sometimes, it is possible to reduce, or even remove, the influence of factors through management. For example, a site may not reach its visitor potential because of badly maintained access roads within the site. These can be repaired. We can, therefore, consider the relationship between the factors that affect access and the management that will be required to control the impact of the factors.

Where fewer visitors visit a site than would normally be expected or required, management actions will be needed to remedy the situation, for example, improving the transport to and on the site, the provision of accommodation, improved publicity, and the introduction of guided tours.

This section must also include an assessment to ensure that public access does not adversely affect the features or the site. The management of the features has been dealt with in earlier sections of the plan. In the rationale sections where the management of the various features is considered, the impact or potential impact of visitors on the features should have been recognised as a key factor. In some cases, the rationale will identify a need to control visitors or some of their activities. All that is required here is a summary of the management required to ensure that the impact of visitors is under control.

The health and safety of visitors must be a prime concern. The site hazards have been identified earlier in the plan. Consideration is now given to what steps should be taken to minimise the risk to visitors. Depending on the nature of the hazard, there are a number of management actions that can be employed. The most obvious is to prevent access to dangerous areas or objects. In all cases, there is a requirement to ensure that visitors are aware of the hazards and of any steps that they must take to avoid risk. This requirement for the provision of information is a management activity and will be identified at this stage. Interpretation is different, and an interpretation plan will be eventually be prepared for all sites.

In some cases, it may not be possible to conclude, with any certainty, what the appropriate level of facilities should be. The only approach is to seek best advice and run a trial or an experiment. If the outcome is acceptable, continue; if not, modify the approach or try something different. To some extent, most management is trial and error; we learn through experience what the most effective and efficient management may be at any given time.

### 8.3.3 Management projects

The rationale is complete when all the management projects required to meet the objective have been identified and described. Management projects can include, for example, provision of site infrastructure, paths, car parks, bridges, etc. For very large projects, consider the need for operational objectives. These are outlined in the next section.

**NOTE:** Please apply the standard CMS protocols when planning individual projects.

# 9 INTERPRETATION

**Introduction**

Interpretation is concerned with providing information in an attempt to enhance the visitors' experience and to help them understand, enjoy and appreciate the site, its conservation features and any other features of interest. Interpretation is an essential tool that can be used for a variety of purposes. It is a means of helping to achieve organisational and site-specific objectives by influencing others.

It is important that the provision of information, for example safety signs, is not confused with interpretation.

Interpretation can:

- Help organisations to convey their general messages and enhance the corporate image.
- Provide information and insights that provoke interest, promote understanding and foster feelings of care for the protected area and our environment.
- Convey the importance and significance of protected areas and their management.
- Help to protect the site and the site features by influencing the way in which visitors behave, and so minimising their impact on the site.

**IMPORTANT**

This is not a guide to preparing an interpretation plan. Many competent and accomplished authors have provided guidance on planning and delivering interpretation. This section in the management plan is concerned with assessing the need, and providing a justification, for the production of an interpretation plan.

**Organisational or corporate policies**

All site policies are held in section 2 of the plan. It should contain a section that sets out the interpretation policies, if any, of the organisation responsible for managing the site.

**Description**

The information required in the description will have been covered in earlier sections of the plan. Please refer to the general description (section 3).

## 9.1 Evaluation

Evaluation, in the context of this section, is simply a structured approach to making decisions. In particular, evaluation for interpretation is concerned with considering the need for interpretation on a site. It is about seeking the answers to several key questions. For example:

- Is there an audience, or potential for an audience, sufficient to justify the provision of interpretation?

- Is there a requirement to deliver any site-specific messages that arise from a need to protect the site, its conservation features and any other features of interest, including landscape and wilderness qualities?

- Is there a need to provide interpretation in order to help visitors attain a greater awareness and understanding of the site, its features and management?

- Is there a need to provide interpretation in order to help visitors enjoy their visit to the site?

Far too often, the evaluation section in management plans is rambling and inconclusive, so take care to avoid that trap.

## 9.2 Site specific interpretation policy

The objective for interpretive provisions is quite different to the general approach used in the preceding sections. In this section, the planner is concerned with identifying the level of resources that should be devoted to planning and providing interpretation.

The following general categories, or levels, may be used, but must be elaborated or modified to take account of site-specific conditions. Include a short explanation of why the particular level was selected:

**No interpretation**
This category is appropriate for sites that are not, and are unlikely to be, visited.

**Minimal provision**
This will be appropriate for sites that have very few visitors and where there is little or no requirement to influence the behaviour of visitors while they are on the site. There may be little intrinsic interest on the site, and limited opportunities for conveying corporate messages. This will probably mean that the only requirement will be the provision of basic signs.

**Limited provision**
This level of provision is for sites where the features are reasonably robust and unlikely to be damaged by visitors. The sites may possess considerable intrinsic interest and opportunities for conveying corporate messages, but are visited by small numbers of people. They may be remote or inaccessible. Provisions could be extended to included guided walks and/or vehicle tours, information boards, tourist maps and a simple leaflet.

**Medium provision**
In this case, the site features are reasonably robust and unlikely to be damaged by visitors and the site is, or will be, visited by sufficient numbers of people to justify significant expenditure on interpretation. The site will have reasonably easy access and will provide good opportunities for conveying corporate messages. Interpretation will help to minimise any negative impact that visitors may have on the site. Provisions could include a full programme of guided walks or vehicle tours, several information boards and a small information centre. A range of leaflets and tourist maps could also be

provided.

**Maximum level**
This level is reserved for the very popular and easily accessible sites that attract very large numbers of visitors. Typically, the site will possess considerable intrinsic appeal and opportunities for conveying corporate, and general, nature conservation messages. Provisions could be as above but on a much larger scale, with one or more manned information centres.

## 9.3 Performance indicators and monitoring

The approach used to identify performance indicators, (attributes and factors), in the section on nature conservation features is not applicable in this section.

The selection of performance indicators for interpretation objectives can pose difficulties, particularly when attempting to detect direct changes in visitors' feelings, attitudes or behaviour. Although these can be measured by questionnaire or observation, the resource levels to get statistically valid data can be prohibitive.

The interpretation provision on any individual site may be a component of a wider programme. In this instance, performance indicators would be better assessed through wider surveys, e.g. those of a regional or national tourism organisation.

**The development of monitoring projects should be given a high priority during the preparation of an interpretation plan.**

# 10 OPERATIONAL OBJECTIVES

On all sites, there will be a requirement to meet legal, and any other, obligations. One of the functions of this section is to develop operational objectives and associated management projects to ensure that these obligations are met.

## 10.1 Operational objectives

These are not strictly objectives as defined for the features. They are, in fact, management actions, or the operations that we must carry out in a protected area to ensure that we are able to meet our prime feature objectives. However, for most sites it is difficult, and would be extremely cumbersome, to attempt to associate all activities with the individual feature objectives. This would be particularly repetitive when an activity is carried out in respect of many of the features. Thus, the rules applied to the feature objectives are not relevant in this section. However, it is important that the objectives are concise and easily understood. Whenever possible, recording systems should be included to ensure that compliance with the objective can be measured.

**Important:** The objectives in this section must be preceded by a discussion that provides an explanation for their inclusion.

**Examples of obligations**

Obligations will include a requirement to comply with any health, safety and public liability legislation. Organisations will impose procedures and specify certain operational requirements for Reserve Managers, for example, requirements for reporting and record keeping. Where these requirements are elaborate or complex, and are not easily accommodated elsewhere in the plan, it may be appropriate to include a procedural objective. Occasionally, a management activity will be so complicated that an attempt to describe and cost everything under a single heading may be very difficult. An example of this might be the provision of a large and complex footpath system. In this case, the operational objective could be to provide and maintain a system of footpaths, and this would provide the link or focus for a series of individual management projects.

## 10.2 Rationale

For each objective, include a concise rationale to consider and introduce, in outline, the range of projects that will be required to meet the above objectives.

## 10.3 Management projects

This section is a continuation of the rationale for both of the above sections. The work required has already been outlined in the rationale.

The function of this section is to describe, in detail, all the management work or projects that must be carried out on the site to ensure that all obligations are met.

# 11 ACTION PLAN

Each management objective will generate a range of projects or individual areas of work. The projects have been identified and described in the earlier stages of the plan. The compilation of all the individual project plans produces an action plan. In other words, it is a complete list, with costs, times, staff requirement etc., of all the work planned for the site.

## 11.1 Work programmes & various reports

Site managers require a range of work programmes and other reports. Most commonly, a programme of work, at least for the key personnel, is required. This will contain details of the various tasks or projects to be completed, the individuals responsible for the work, when the work should be completed, and where. The work programmes are generated from information contained in all the individual project plans. Without computers this can be an extremely tedious and difficult task. Sites can have many objectives, and each objective can be associated with a range of projects. Often, an individual project will be relevant to more that one objective. Computer databases are the obvious solution, and this was one justification for the development of the CMS computer system.

The CMS database provides an extremely wide range of programmes and reports. Please see the section on CMS for details.

# 12 PROJECT RECORDING

It is essential that records are maintained for all monitoring, management activities, significant events and surveys. The maintenance of records is expensive and can impose considerable demands on resources. It is, therefore, important that recording is carried out as an integral part of the planning process, and not on a serendipitous basis. Obviously, there will, from time to time, be events that are so significant that they must be recorded regardless of any plan, and provision must be made to accommodate these. The review process and audit, dealt with in the next section, is entirely dependent on the feedback of information. This alone is sufficient to justify the maintenance of recording systems. However, in addition to internal requirements, there is a need to disseminate information relating to conservation management globally. Far too much time and effort is wasted as a result of unnecessary duplication of work and re-invention of (often square) wheels. We would make far more progress if we were able to benefit from sharing the experiences of others.

However, information is only as good as it is accessible. Thus, it is clearly important that data are collected and stored using accessible and standard systems. The management of this data is essential, but can be quite complex, especially on large sites or when there is a need to share information over several sites.

The obvious solution is to use a computer database. The Conservation Management System database, CMS, has been available since 1990. CMS will enable site managers to maintain site records and present reports in an efficient and effective manner. Managed data can then be used to update and amend the site management plan, to fulfil the information requirement of organisations and individuals, to ensure that current data are readily available, and to provide data for national or regional surveys. The system

provides a record of management and site conditions that can be used to demonstrate effective and appropriate site management. It will also highlight failings and inappropriate management.

# 13 REVIEW

## 13.1 Annual review

The main purpose of the annual review is to ensure that the site is being managed in accordance with the approved management plan. It is important to ensure that any serious, unexpected events or trends that could affect management are taken into account. The review is also an opportunity for the site manager(s) to present the preceding year's work. The site manager(s) should not feel that they are on trial.

The management team responsible for the site should carry out the review. The structure of the team will vary from organisation to organisation, but, in general, the site manager(s) and their line manager(s) should be present, along with representatives from various relevant disciplines within an organisation. Interested parties from outside an organisation may also be invited to attend. The essential point is that the group should be able to make an objective appraisal of the year's work and reach agreement on the next annual work plan.

The group must ensure that all high priority projects have been completed, and that all lesser projects have been reported on. In the case of the former, they should seek a satisfactory explanation to account for any projects that have not been completed. Shortfalls in achievement and performance should be noted on each appropriate project form, and any necessary amendments made to the project register record and/or the next annual plan. If there are serious problems and it becomes clear that, for example, an organisation is not providing sufficient resources for a site, priorities may have to be re-assessed and/or the operational objectives redefined. Any additional resources that become available for use on a site should be dealt with in a similar way, by re-assessing priorities.

## 13.2 Long-term review

Plans require a major review at predetermined intervals. The main function of this review is to determine the status of the features on the site. Are they favourable, unfavourable, declining, improving or maintained?

The length of the interval can be as little as one year, and would not usually exceed 10 years. The more dynamic or threatened a site, the shorter the interval or planning cycle becomes. This does not mean that objectives are restated and the entire plan rewritten. The prime function of the review is to ensure that the objectives and options, as stated in the plan, are still relevant, and that management has been, and will continue to be, effective in achieving the desired objectives.

# 14 AUDIT

In addition to, or as a replacement for, the long-term review, nature reserves and protected areas should be audited. Audit should be considered an essential component of the planning process.

## 14.1 Functions

- To assess whether or not a site is being managed at least to the standard required by the organisation or department responsible.
- To confirm, as far as possible, that management is effective and efficient.
- To ensure that the status of the site features is accurately reported.
- To provide an opportunity for the site manager(s) and other appropriate staff to discuss any issues relating to the site with the audit team.

## 14.2 Timing

Each site should be audited at least every five years. If an audit identifies any issues or problems that need to be addressed between audits, additional intermediary audits may be arranged at the discretion of the audit team or at the request of senior management.

## 14.3 Personnel

The audit team will comprise:

- Auditors - these should be external consultants or independent staff from an auditing group/department
- The site manager(s) must always attend.
- Personnel responsible for managing site staff.
- Other relevant staff may also be invited to attend as required.

## 14.4 Procedure

An audit will comprise two stages:

- An examination of the management plan, the adopted project planning and recording system and safety documentation.
- A site visit/inspection.

The site manager will be required to provide a copy of the current management plan, annual work plan and long-term work plan prior to the audit date. In addition to these documents, the audit team will inspect the current version of the project planning and recording system and health and safety documents.

## 14.5 Reporting

A draft audit report will be sent to the site managers to allow them to comment on its accuracy. This will then be returned to the audit team and an amended audit report, including observations and recommendations, will be sent to the site managers and to appropriate senior staff. Management responses must then be returned to the audit team. A final report will be issued to the senior

staff and other responsible officers. This report will identify agreed management responses and actions, together with officers responsible for ensuring these are undertaken and deadlines for action. The audit team will retain the original signed document.

## 14.6 Main sections of the site audit report

**1** **Appraisal of the management plan**

**2** **Appraisal of the recording system & work plans**

**4** **Compliance with health and safety**

**5** **Site inspection** (OUTPUTS)

- **5.1** Check for compliance with the plan
- **5.2** Check for any unplanned/unauthorised activities
- **5.3** Check condition of the site infrastructure and facilities

**6** **Resources** (INPUTS)

- **6.1** Finance
- **6.2** Staff
- **6.3** Other resources (for example, machinery, vehicles, tools)
- **6.4** Infrastructure (workshops, stores)

**7** **Feature assessment** (OUTCOMES)

**8.** **Summary of recommendations and management response**

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# APPENDIX 1 CMS PROJECT CODES AND TITLES

**BRIEF DESCRIPTIONS AND GUIDANCE**

The CMS project codes are used throughout the UK for nature conservation and countryside management plans. They are also used within the CMS database. This sections provides guidance on the use of the codes and a full list of the codes.

The following descriptions of project codes are intended to guide selection and consistent use. They should not be taken as being comprehensive, and there may be occasions when the code description doesn't quite match your purpose. This doesn't means that your selection of the code is wrong - if the code title appears to match your project then use it. The descriptions can't cover all possible uses of each code.

*Note that descriptions are not given for all project codes. If the meaning of the project code and title is clear, and there is no possibility of confusion, it is not included here.*

**Recording (R) codes**

Records/Archive (RV)

RV00 Collect published and unpublished references
Give full references for published papers; state location of copies where reports are unpublished. Also use where papers/reports are referred to in, for example, a research project (RF05) description.

RV10 Collect photographs
Give a summary of the subjects covered rather than a complete list of each image. Make sure to note the location of the photograph and reference number if used. Fixed point photography would normally be recorded under the appropriate monitoring or surveillance code.

RV20 Collect/commission aerial photographs
Give a summary of the coverage, scale and what subjects of the photographs rather than a complete list of individual details. Make sure to note the location of photograph storage and reference numbers if used.

RV30 Collect maps
List the map coverage with scales. Also list any specialised maps of the site e.g. geological maps. Also use where a map is produced as a result of a survey and recorded elsewhere, for example under RF02 for vegetation mapping.

RV40 Create new maps
Include mapping to establish a grid for recording, to confirm the position of a boundary, and/or to establish compartment boundaries.

RV41 Provide/maintain boundary or other ground markers
Use for the provision and maintenance of any boundary or other ground markers.

RV50 Collect archival records
Use for records obtained before the site fell under current management.

RV51 Collect media references

From local and national newspapers, magazines, radio or television. The project record could form an index to any press coverage.

Records/Physical (RP), Biological (RB), Flora (RF) and Fauna (RA)
The last digit in each project code for these four headings is used to indicate the category of data collected:

| *Code* | *Category* | *Description* |
|---|---|---|
| R**1 | Natural event | Significant natural changes, events or extremes. For example, disease/death/natural damage to plants or animals, extinction, exceptional weather conditions, geomorphological changes - spit formation, landslide. |
| R**2 | Survey | Usually a one-off exercise to find out what is present and, in some cases, how it is distributed. This does not include repeated surveys (see R**4) and should not be used to establish whether or not a required condition is being met (see R**3). |
| R**3 | Monitor | Monitoring is the making of observations with sufficient precision to determine whether a required condition is being met. |
| R**4 | Surveillance/census | Repeated and regular measurements/surveys. This should be used to establish whether or not a required condition is being met, though these activities could help establish values for a monitoring project. Examples include climatological readings, ITE butterfly transects, Common Bird Census, wildfowl counts. |
| R**5 | Research project | A study set up to test a specific hypothesis. There may be some experimental treatment involved, including the use of controls. |
| *Code* | *Category* | *Description* |
| R**6 | List species | Initiation or updating of species lists for any group of plants or animals by site or by habitat. Does not include the process of producing a list as part of a survey. |
| R**0 | General | All records which do not definitely come under R**1 to R**6. Examples include basic descriptions, general observations, historical data. |

For example, project code RF1* - *Records/Flora/trees & shrubs* - can be further defined as:

RF11 Collect information on trees/shrubs, natural event
RF12 Collect information on trees/shrubs, survey
RF13 Collect information on trees/shrubs, monitor

Records/ Human impact (RH)
RH10 Collect information on land use history
Any information on previous land use.

RH11 Collect information on past management
Management before the site was taken over by the present management. It can also be used to record the collation of past management records.

RH30 Collect information on research activities
Should be used for lists of research projects, current or past, carried out on the site. Major research projects involving site-specific research should be described under the appropriate Physical, Flora or Fauna code with the last digit 5.

RH31 Collect information on education activities
Use for all visits by groups, schools, universities and societies if the purpose of the visit is educational. If there is a need to stress the information input by the site manager MI20 can be used as a secondary project code.

RH32 Collect information on public use, count educational groups
This is used to record the use of the site by educational groups when a well defined system is used to accurately record numbers of groups or individuals. It would be used in cases where an authority sets even standards of recording throughout the organisation.

RH33 Collect information on public recreational use
This should be used for general visitor numbers, assessment of visitor pressure and descriptions of various recreational uses of sites.

RH35 Collect information on trespass/theft/damage
If trespass involves a recreational activity RH50 can be used as a secondary project code. Recording of damage should be restricted to acts of vandalism and general effects of public pressure. For example, path erosion should be recorded under RH50.

RH36 Collect information on unplanned/undesirable activities
Include accidents to visitors and activities which are not intentionally damaging but should be discouraged, for example flower picking, bird disturbance. Intentional acts of damage should be recorded under RH60.

RH80 Collect information on management, by owners/tenants/public bodies/neighbours
Any management by owners etc. unless carried out under an agreement with the site manager. Should be used especially for activities by neighbours which may have a damaging effect on the site, for example herbicide spraying, draining. Include pipeline/cable laying and maintenance.

RH90 Collect information on other activities, by owners/tenants/public bodies/neighbours
Include shooting, fishing and other sporting or recreational activities by owners etc. Also any other activities by owners etc. which are not strictly management, for example change of ownership of neighbouring land, bomb disposal.

**Management (M) codes**

Management/Information and education (MI)

MI00 Provide off-site information and education

Used for talks, displays, exhibitions etc. away from the site which give information about the site or conservation/natural history generally. When recording talks, displays and exhibitions held on the site code MI20 should be used.

MI10 Provide general information for visitors

General advice to visitors, answering enquiries and provision of signs with general information about the site. The maintenance of signs may be included.

MI20 Provide educational information/facilities for visitors

Use for provision and use of nature trails, interpretive signs which give more than general information about the site (e.g. information on species or habitats), educational exhibitions or displays, and reserve leaflets. Use of the site by school, university and society groups should be recorded under RH32, although this code can be used if the site's staffs' input is significant.

MI30 Provide information for specialists

Visits by specialists from outside an organisation interested in any aspect of the site, or in using the site for research. Should also be used for visiting VIPs. Visits by in-house specialists should be recorded under AR40. Any major site-specific work carried out by visiting specialists should be recorded under the appropriate code relating to surveys, research projects etc..

MI40 Provide information for recreational visitors

Information to visitors on any aspects of recreation on the site, except for information on access and general use of the site, which should be recorded under MI10.

Management/Liaison with owners, neighbours etc. (ML)

ML00 Liaise with owners / occupiers

Include owners and their agents, managers, tenants, graziers and any other occupiers of the site.

ML10 Liaise with commoners

Liaison with any people with common rights over the site.

ML20 Liaise with right-holders

Should be used to record liaison with those who have shooting, fishing or access rights over the site, anyone concerned with public footpath rights, mineral right-holders etc.

ML30 Liaise with neighbours

Liaison with neighbouring landowners and their agents, tenants or managers whose actions may have an effect on the site. Any liaison with local villagers, if not neighbouring land holders, should be recorded under ML50.

ML40 Liaise with local/national authorities

Liaison with local councils, public utilities, etc..

ML50 Liaise with local community/groups

Should be used for liaison with local villagers/townspeople, local conservation and natural history groups, and any other local groups who have an interest in the site.

ML60 Liaise with emergency services

For liaison with police, fire and ambulance services, coast-guard and mountain rescue.

ML70 Liaise with media
Liaison with local and national press, television and radio.

ML80 Liaise with others
Liaison with any group or individual not covered by ML00 to ML70. Can also be used for a miscellaneous list of liaisons if there is not a special need to record them under separate ML00 to ML70 codes.

Management/Patrol (MP)
MP00 Protect site/species by patrol
Should be used for all patrols by staff and volunteers. Recording of damage noted during course of patrols should be under RH60 to RH90. Recording of enforcement of bylaws should be under AS00.

Management/Habitat (MH)
Selecting habitat management codes should be straightforward and thus codes do not need listing separately. However, the following points should be noted:

Where management is being carried out by owners, tenants or public bodies, and this management is not directly related to management for nature conservation, code RH80 should be used.

If a particular management activity is not listed under the required habitat, use MH*9 "Manage habitat, -------, by other activities". DO NOT record under the wrong habitat just because the required activity is listed there. For example, coppicing of isolated trees in grassland should be recorded under MH19, not under MH00.

In a few cases a particular management activity could be recorded under two different habitat management codes. For example, assisting natural regeneration in woodland may be carried out by use of exclosures and could therefore be recorded under MH03 or MH06. Consider the primary purpose of the management and choose which code seems the more important. The alternative code could be included as a secondary project code if really necessary.

The artificial habitat codes should be used for recording of management in gardens, arable fields and other similar habitats which are not covered by the MH codes.

Where a single species, or group of species, is being managed the relevant species management code should be used, even if the action also constitutes habitat management. This applies particularly to control of weed and pest species and management to maintain or increase the presence of a key species.

In some cases habitat management may be carried out which will also benefit a particular species or group of species. For example, scrub control may be necessary for the management of a wood, but this will also help to encourage butterflies. In this case the secondary project code MS70 could be used.

Management/Manage estate, site fabric (ME)
ME01 Manage boundary structures
Use for the provision and/or maintenance of all fences, hedges, walls, banks and boundary markers, whether internal or on the site boundary; gates, stiles and barriers can be included. Provision of enclosures and exclosures should normally be recorded under MH06, MH16 etc. Maintenance of enclosures/exclosures should be included here. Use the qualifying phrase to indicate new, replacement or maintenance.

ME02 Manage other structures
Use for provision and/or maintenance of all structures with the exception of fences, hedges, walls, banks, fire control equipment paths, rides, roads, tracks, ditches and dykes.

ME21 Implement emergency procedures
This could include the provision, maintenance and use of any structures or equipment used in fire control; the provision, storage and use of emergency rescue equipment; the provision of first aid equipment. Use of the project number and qualifying phrase is essential to specify details.

ME22 Trim/fell/clear trees/shrubs
Should be used for management of dead, dangerous or overhanging trees and clearance of trees for access. Control of trees as part of habitat management should be recorded under MH00, MH02, MH04, MH07, MH08, MH14, MH31, MH42, MH52, MH72 and MA04.

ME40 Provide/maintain paths/rides/roads
Any provision or maintenance of paths etc. except where they are of importance in habitat management, for example maintenance of grassy rides in woodlands which may be of value to herb species or butterflies. Car parks, steps and board walks can be included here, as well as maintenance of nature trails.

ME50 Provide/maintain drainage systems
Provision or maintenance of any of these features. Do not include those which are of importance in habitat management such as maintenance of ditches and dykes as part of fen management (MH57), or maintenance of rivers and streams which are of conservation interest (MH60 to MH69).

Management/Manage domestic animals (MG)
MG00 Manage cattle
Should be used for care, maintenance, sale and purchase of cattle, and can include animals used for conservation management but owned by others. Recording of numbers, dates and location of cattle grazing should be under MH10, MH20 etc., or monitoring of cattle numbers under RA03.

MG10 Manage sheep
As for cattle (see MG00).

MG20 Manage ponies
As for cattle (see MG00).

MG30 Manage other domestic animals
Should be used for care, maintenance, sale and purchase of grazing stock other than cattle, sheep or ponies. This project can also be used for red deer, and can include other stock used for conservation management but owned by others. Use the project number and qualifying phrase to identify the type of stock. Recording of numbers, dates and location of stock grazing should be under MH10, MH20 etc.

Management/Manage machinery (MM)
MM00 Acquire/service vehicles
Should be used for acquisition and maintenance of cars, vans, trucks, tractors, trailers and boats.

MM10 Acquire/service machinery
Acquisition and maintenance of tractor attachments, pumps, mowers, power saws, and any other machinery.

MM20 Acquire/maintain tools/equipment
Use for hand tools, safety equipment, scientific instruments etc.

**Administration (A) codes**

Administration/Notification (AN)
AN00 Site classification
Includes initial surveys (which may be recorded in detail under Physical, Flora or Fauna codes), and any liaison necessary to decide the status of the site.

AN10 Site notification
Can include all processes necessary to notification of a site, including compiling PDOs and preparing and amending Consents.

AN20 Site re-notification
Should be used, for example, for recording re-notification of any SSSI previously notified under the 1949 Act, and re-notification of any SSSI which is extended or has part of the site deleted.

AN40 Register site
Local land charge applies in England and Wales, and local authority register applies in Scotland.

Administration/Acquisition/Declaration (AA)
AA00 Acquire site, by purchase/lease/agreement
Can include any processes involved in acquisition of a site.

AA10 Acquire site extension, by purchase/lease/agreement
Should be used for any addition to an existing statutory site, even if it is larger in area than the original site.

AA20 Increase protection acquiring additional legal rights
Should be used for any action which increases control or protection of the site, for example by re-negotiating an existing agreement.

AA30 Site declaration
Can include any processes involved in the declaration of a reserve, e.g. press briefings.

AA40 Site de-declaration
Includes de-declaration of the whole site or part.

AA50 Maintain Estate Terrier
Any information relating to the land holding which is not recorded under AA00 to AA40 and AL00 to AL30 can be included. For example, boundary revisions and changes in leases, agreements or conditions.

Administration/Legal (AL)
AL00 Maintain legal holding, by e.g. renewing lease/agreement/tenancy
Should be used for recording leases, agreements and tenancies when land is leased etc. from other land owners, and in which land is let to other users e.g. grazing tenants.

Issuing or renewing of licenses, and preparation and approval of Inheritance Tax exemption cases should also be recorded here.

AL10 Safeguard legal title, by e.g. closing site/road one day per year
Any action which is necessary to safeguard the title.

AL20 Maintain the legal holding by making/receiving payments
Any payments made or received on an annual regular basis.

AL30 Protect the site by convening annual meeting
Should only be used for meetings that are legally required.

Administration/Site and species safeguard, law enforcement and associated work (AS)
AS10 Implement a visiting permit system
Should be used to record the operation of the permit system and the number of permits issued. Use only where visits to the site are restricted to permit-only.

AS20 Implementing collecting/research permit system
This code is for recording the operation of the permit system and number of permits issued. Details of research projects should be recorded under RH30 or under the appropriate Physical, Flora or Fauna code with the last digit 5, for major research projects.

AS60 Protect site, by controlling hunting, fishing, bait digging
Any control over plants and animals killed or removed from the site should be recorded here, except for illegal activities such as theft of birds' eggs. For example, wildfowl shooting bans and bait digging control.

Administration/Reports: correspondence and site details (AR)
AR30 Maintain general correspondence
This should be used to record correspondence and all general office duties such as filing.

AR40 Record administrative details, e.g. staff appointments/visits
Any information relating to staff appointments and personnel management, as well as visits to the site by other staff, should be recorded under this code.

Administration/Training and management (AT)
AT30 Provide other training for staff
Should be used for any training of site managers or other site staff which is not recorded under AT00 to AT20.

## CHECKLIST OF PROJECT CODES

The following checklist of project codes is reviewed on a regular basis. Note that although the tree for the codes is shown, only 4-character codes, i.e. a code comprising of two letters and two digits, are valid project codes.

| Project Code | Title |
|---|---|
| **R** | **Recording** |
| **RV** | **Record, archive - general, photos, maps etc.** |
| RV00 | List/collect references, published and unpublished |
| RV10 | List/collect photographs, general |
| RV20 | List/collect/commission photographs aerial |
| RV30 | List/collect maps |
| RV40 | Create base map |
| RV50 | List/collect records, archival |
| RV51 | Collect press cuttings |
| RV60 | List/collect satellite imagery |
| **RP** | **Record, physical environment** |
| RP00 | Collect data, climatological |
| RP01 | Collect data, climatological, natural event |
| RP02 | Collect data, climatological, survey |
| RP03 | Collect data, climatological, monitor |
| RP04 | Collect data, climatological, count/estimate/measure/census |
| RP05 | Collect data, climatological, research project |
| RP10 | Collect data, hydrological |
| RP11 | Collect data, hydrological, natural event |
| RP12 | Collect data, hydrological, survey |
| RP13 | Collect data, hydrological, monitor |
| RP14 | Collect data, hydrological, count/estimate/measure/census |
| RP15 | Collect data, hydrological, research project |
| RP20 | Collect data, geological |
| RP21 | Collect data, geological, natural event |
| RP22 | Collect data, geological, survey |
| RP23 | Collect data, geological, monitor |
| RP24 | Collect data, geological, count/estimate/measure/census |
| RP25 | Collect data, geological, research project |
| RP30 | Collect data, geomorphological |
| RP31 | Collect data, geomorphological, natural event |
| RP32 | Collect data, geomorphological, survey |
| RP33 | Collect data, geomorphological, monitor |
| RP34 | Collect data, geomorphological, count/estimate/measure/census |

| | |
|---|---|
| RP35 | Collect data, geomorphological, research project |
| RP40 | Collect data, pedological |
| RP41 | Collect data, pedological, natural event |
| RP42 | Collect data, pedological, survey |
| RP43 | Collect data, pedological, monitor |
| RP44 | Collect data, pedological, count/estimate/measure/census |
| RP45 | Collect data, pedological, research project |
| RP50 | Collect data, landscape |
| RP51 | Collect data, landscape, natural event |
| RP52 | Collect data, landscape, survey |
| RP53 | Collect data, landscape, monitor |
| RP54 | Collect data, landscape, count/estimate/measure/census |
| RP55 | Collect data, landscape, research project |
| RP61 | Collect data, oceanographic, natural event |
| RP62 | Collect data, oceanographic, survey |
| RP63 | Collect data, oceanographic, monitor |
| RP64 | Collect data, oceanographic, count/estimate/measure/census |
| RP65 | Collect data, oceanographic, research project |
| **RB** | **Record, biology general** |
| RB00 | Collect data, biological |
| RB01 | Collect data, biological, natural event |
| RB02 | Collect data, biological, survey |
| RB03 | Collect data, biological, monitor |
| RB04 | Collect data, biological, count/estimate/measure/census |
| RB05 | Collect data, biological, research project |
| RB06 | Collect data, biological, list species |
| RB10 | Collect data, palaeotological |
| RB11 | Collect data, palaeotological, natural event |
| RB12 | Collect data, palaeotological, survey |
| RB13 | Collect data, palaeotological, monitor |
| RB14 | Collect data, palaeotological, count/estimate/measure/census |
| RB15 | Collect data, palaeotological, research project |
| RB16 | Collect data, palaeotological, list species |
| **RF** | **Record, vegetation** |
| RF00 | Collect data, vegetation |
| RF01 | Collect data, vegetation, natural event |
| RF02 | Collect data, vegetation, survey |
| RF03 | Collect data, vegetation, monitor |
| RF04 | Collect data, vegetation, count/estimate/measure/census |
| RF05 | Collect data, vegetation, research project |
| RF06 | Collect data, vegetation, list species |
| RF10 | Collect data, trees/shrubs |
| RF11 | Collect data, trees/shrubs, natural event |

| | |
|---|---|
| RF12 | Collect data, trees/shrubs, survey |
| RF13 | Collect data, trees/shrubs, monitor |
| RF14 | Collect data, trees/shrubs, count/estimate/measure/census |
| RF15 | Collect data, trees/shrubs, research project |
| RF16 | Collect data, trees/shrubs, list species |
| RF20 | Collect data, other vascular plants |
| RF21 | Collect data, other vascular plants, natural event |
| RF22 | Collect data, other vascular plants, survey |
| RF23 | Collect data, other vascular plants, monitor |
| RF24 | Collect data, other vascular plants, count/estimate/measure/census |
| RF25 | Collect data, other vascular plants, research project |
| RF26 | Collect data, other vascular plants, list species |
| RF30 | Collect data, bryophytes |
| RF31 | Collect data, bryophytes, natural event |
| RF32 | Collect data, bryophytes, survey |
| RF33 | Collect data, bryophytes, monitor |
| RF34 | Collect data, bryophytes, count/estimate/measure/census |
| RF35 | Collect data, bryophytes, research project |
| RF36 | Collect data, bryophytes, list species |
| RF40 | Collect data, algae |
| RF41 | Collect data, algae, natural event |
| RF42 | Collect data, algae, survey |
| RF43 | Collect data, algae, monitor |
| RF44 | Collect data, algae, count/estimate/measure/census |
| RF45 | Collect data, algae, research project |
| RF46 | Collect data, algae, list species |
| RF50 | Collect data, lichens |
| RF51 | Collect data, lichens, natural event |
| RF52 | Collect data, lichens, survey |
| RF53 | Collect data, lichens, monitor |
| RF54 | Collect data, lichens, count/estimate/measure/census |
| RF55 | Collect data, lichens, research project |
| RF56 | Collect data, lichens, list species |
| RF60 | Collect data, fungi |
| RF61 | Collect data, fungi, natural event |
| RF62 | Collect data, fungi, survey |
| RF63 | Collect data, fungi, monitor |
| RF64 | Collect data, fungi, count/estimate/measure/census |
| RF65 | Collect data, fungi, research project |
| RF66 | Collect data, fungi, list species |

| RA | Record, fauna |
|---|---|
| RA00 | Collect data, mammals |
| RA01 | Collect data, mammals, natural event |
| RA02 | Collect data, mammals, survey |
| RA03 | Collect data, mammals, monitor |
| RA04 | Collect data, mammals, count/estimate/measure/census |
| RA05 | Collect data, mammals, research project |
| RA06 | Collect data, mammals, list species |
| RA10 | Collect data, birds |
| RA11 | Collect data, birds, natural event |
| RA12 | Collect data, birds, survey |
| RA13 | Collect data, birds, monitor |
| RA14 | Collect data, birds, count/estimate/measure/census |
| RA15 | Collect data, birds, research project |
| RA16 | Collect data, birds, list species |
| RA20 | Collect data, herptiles |
| RA21 | Collect data, herptiles, natural event |
| RA22 | Collect data, herptiles, survey |
| RA23 | Collect data, herptiles, monitor |
| RA24 | Collect data, herptiles, count/estimate/measure/census |
| RA25 | Collect data, herptiles, research project |
| RA26 | Collect data, herptiles, list species |
| RA30 | Collect data, fish |
| RA31 | Collect data, fish, natural event |
| RA32 | Collect data, fish, survey |
| RA33 | Collect data, fish, monitor |
| RA34 | Collect data, fish, count/estimate/measure/census |
| RA35 | Collect data, fish, research project |
| RA36 | Collect data, fish, list species |
| RA40 | Collect data, Lepidoptera |
| RA41 | Collect data, Lepidoptera, natural event |
| RA42 | Collect data, Lepidoptera, survey |
| RA43 | Collect data, Lepidoptera, monitor |
| RA44 | Collect data, Lepidoptera, count/estimate/measure/census |
| RA45 | Collect data, Lepidoptera, research project |
| RA46 | Collect data, Lepidoptera, list species |
| RA50 | Collect data, Odonata |
| RA51 | Collect data, Odonata, natural event |
| RA52 | Collect data, Odonata, survey |
| RA53 | Collect data, Odonata, monitor |
| RA54 | Collect data, Odonata, count/estimate/measure/census |
| RA55 | Collect data, Odonata, research project |
| RA56 | Collect data, Odonata, list species |

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|---|---|
| RA60 | Collect data, Orthoptera |
| RA61 | Collect data, Orthoptera, natural event |
| RA62 | Collect data, Orthoptera, survey |
| RA63 | Collect data, Orthoptera, monitor |
| RA64 | Collect data, Orthoptera, count/estimate/measure/census |
| RA65 | Collect data, Orthoptera, research project |
| RA66 | Collect data, Orthoptera, list species |
| RA70 | Collect data, other/general insects |
| RA71 | Collect data, other/general insects, natural event |
| RA72 | Collect data, other/general insects, survey |
| RA73 | Collect data, other/general insects, monitor |
| RA74 | Collect data, other/general insects, count/estimate/measure/census |
| RA75 | Collect data, other/general insects, research project |
| RA76 | Collect data, other/general insects, list species |
| RA80 | Collect data, other/general invertebrates |
| RA81 | Collect data, other/general invertebrates, natural event |
| RA82 | Collect data, other/general invertebrates, survey |
| RA83 | Collect data, other/general invertebrates, monitor |
| RA84 | Collect data, other/general invertebrates, count/estimate/measure/census |
| RA85 | Collect data, other/general invertebrates, research project |
| RA86 | Collect data, other/general invertebrates, list species |
| RA90 | Collect data, fauna |
| RA91 | Collect data, fauna, natural event |
| RA92 | Collect data, fauna, survey |
| RA93 | Collect data, fauna, monitor |
| RA94 | Collect data, fauna, count/estimate/measure/census |
| RA95 | Collect data, fauna, research project |
| RA96 | Collect data, fauna, list species |
| **RH** | **Record, human impact** |
| RH00 | Collect data, human impact, general |
| RH01 | Collect data, human impact, survey |
| RH02 | Collect data, human impact, monitor |
| RH03 | Collect data, human impact, count/estimate/measure/census |
| RH04 | Collect data, human impact, research project |
| RH05 | Collect data, human impact, fires, unplanned |
| RH06 | Collect data, human impact, low flying aircraft |
| RH07 | Collect data, human impact, pollution |
| RH10 | Collect data, land use history |
| RH11 | Collect data, past conservation management |
| RH21 | Collect data, archaeological, general |
| RH22 | Collect data, archaeological, survey |
| RH23 | Collect data, archaeological, monitor |
| RH24 | Collect data, archaeological, count/estimate/measure/census |

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|---|---|
| RH25 | Collect data, archaeological, research project |
| RH26 | Collect data, archaeological, inventory |
| RH30 | Collect data, public use, research |
| RH31 | Collect data, public use, education |
| RH32 | Collect data, public use, count educational groups |
| RH33 | Collect data, public use, recreation |
| RH34 | Collect data public use, count visitors |
| RH35 | Collect data, public use, trespass/theft/damage |
| RH36 | Collect data, public use, unplanned/undesirable activities |
| RH80 | Collect data, management, by owners/tenants/public bodies/neighbours |
| RH90 | Collect data, other activities, by owners/tenants/public bodies/neighbours |
| **RM** | **Record, marine** |
| RM01 | Collect data, benthic faunal communities, natural event |
| RM02 | Collect data, benthic faunal communities, survey |
| RM03 | Collect data, benthic faunal communities, monitor |
| RM04 | Collect data, benthic faunal communities, count/estimate/measure/census |
| RM05 | Collect data, benthic faunal communities, research project |
| RM06 | Collect data, benthic faunal communities, list species |
| RM11 | Collect data, Porifera, natural event |
| RM12 | Collect data, Porifera, survey |
| RM13 | Collect data, Porifera, monitor |
| RM14 | Collect data, Porifera, count/estimate/measure/census |
| RM15 | Collect data, Porifera, research project |
| RM16 | Collect data, Porifera, list species |
| RM21 | Collect data, Cnidaria, natural event |
| RM22 | Collect data, Cnidaria, survey |
| RM23 | Collect data, Cnidaria, monitor |
| RM24 | Collect data, Cnidaria, count/estimate/measure/census |
| RM25 | Collect data, Cnidaria, research project |
| RM26 | Collect data, Cnidaria, list species |
| RM31 | Collect data, Annelida, natural event |
| RM32 | Collect data, Annelida, survey |
| RM33 | Collect data, Annelida, monitor |
| RM34 | Collect data, Annelida, count/estimate/measure/census |
| RM35 | Collect data, Annelida, research project |
| RM36 | Collect data, Annelida, list species |
| RM41 | Collect data, Crustacea, natural event |
| RM42 | Collect data, Crustacea, survey |
| RM43 | Collect data, Crustacea, monitor |
| RM44 | Collect data, Crustacea, count/estimate/measure/census |
| RM45 | Collect data, Crustacea, research project |
| RM46 | Collect data, Crustacea, list species |

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|---|---|
| RM51 | Collect data, Mollusca, natural event |
| RM52 | Collect data, Mollusca, survey |
| RM53 | Collect data, Mollusca, monitor |
| RM54 | Collect data, Mollusca, count/estimate/measure/census |
| RM55 | Collect data, Mollusca, research project |
| RM56 | Collect data, Mollusca, list species |
| RM61 | Collect data, Bryozoa, natural event |
| RM62 | Collect data, Bryozoa, survey |
| RM63 | Collect data, Bryozoa, monitor |
| RM64 | Collect data, Bryozoa, count/estimate/measure/census |
| RM65 | Collect data, Bryozoa, research project |
| RM66 | Collect data, Bryozoa, list species |
| RM71 | Collect data, Echinodermata, natural event |
| RM72 | Collect data, Echinodermata, survey |
| RM73 | Collect data, Echinodermata, monitor |
| RM74 | Collect data, Echinodermata, count/estimate/measure/census |
| RM75 | Collect data, Echinodermata, research project |
| RM76 | Collect data, Echinodermata, list species |
| RM81 | Collect data, Tunicata, natural event |
| RM82 | Collect data, Tunicata, survey |
| RM83 | Collect data, Tunicata, monitor |
| RM84 | Collect data, Tunicata, count/estimate/measure/census |
| RM85 | Collect data, Tunicata, research project |
| RM86 | Collect data, Tunicata, list species |
| RM91 | Collect data, marine fauna other, natural event |
| RM92 | Collect data, marine fauna other, survey |
| RM93 | Collect data, marine fauna other, monitor |
| RM94 | Collect data, marine fauna other, count/estimate/measure/census |
| RM95 | Collect data, marine fauna other, research project |
| RM96 | Collect data, marine fauna other, list species |
| **RD** | **Microplan Record Project codes** |
| RD00 | Monitor eco-development success, general |
| RD01 | Monitor socio-economic factors |
| RD02 | Monitor illegal activities |
| RD03 | Monitor human population |
| RD04 | Monitor usage of natural resources |

| M | Management |
|---|---|
| MI | **Wardening: Information & education.** |
| MI00 | Inform public, offsite |
| MI10 | Inform visitors, general |
| MI20 | Inform visitors, educational |
| MI30 | Inform visitors, specialist |
| MI40 | Inform visitors, recreational |
| MI50 | Provide interpretative material |
| ML | **Wardening: Liaison with owners/neighbours etc.** |
| ML00 | Liaise, owners/occupiers |
| ML10 | Liaise, commoners |
| ML20 | Liaise, right-holders |
| ML30 | Liaise, neighbours |
| ML40 | Liaise, local/national authorities |
| ML50 | Liaise, local community/groups |
| ML60 | Liaise, emergency services |
| ML70 | Liaise, media |
| ML80 | Liaise, others |
| MP | **Wardening: Patrol** |
| MP00 | Protect site/species by patrol |
| MP10 | Law enforcement, maintain boundary gates |
| MP11 | Law enforcement, maintain surveillance posts |
| MP12 | Law enforcement, maintain staffing |
| MP13 | Law enforcement, maintain equipment |
| MP14 | Law enforcement, maintain communications |
| MH | **Manage habitat** |
| MH00 | Manage habitat, woodland/scrub, by coppicing |
| MH01 | Manage habitat, woodland/scrub, by planting/sowing |
| MH02 | Manage habitat, woodland/scrub, by thinning/group felling |
| MH03 | Manage habitat, woodland/scrub, by assisting natural regeneration |
| MH04 | Manage habitat, woodland/scrub, by ride/path/glade maintenance |
| MH06 | Manage habitat, woodland/scrub, by enclosure/ exclosure |
| MH07 | Manage habitat, woodland/scrub, by scrub control |
| MH08 | Manage habitat, woodland/scrub, by managing dead wood |
| MH09 | Manage habitat, woodland/scrub, by other activities |
| MH10 | Manage habitat, grassland, by controlled grazing |
| MH11 | Manage habitat, grassland, by controlled burning |
| MH12 | Manage habitat, grassland, by mowing |
| MH13 | Manage habitat, grassland, by sowing/planting/ turf laying |
| MH14 | Manage habitat, grassland, by scrub control |
| MH16 | Manage habitat, grassland, by enclosure/exclosure |
| MH19 | Manage habitat, grassland, by other activities |
| MH20 | Manage habitat, bracken herb, by controlled grazing |

| | |
|---|---|
| MH21 | Manage habitat, bracken herb, by controlled burning |
| MH22 | Manage habitat, bracken herb, by mowing/selective cutting |
| MH23 | Manage habitat, bracken herb, by enclosure/exclosure |
| MH25 | Manage habitat, bracken herb, by spraying |
| MH29 | Manage habitat, bracken herb, by other activities |
| MH30 | Manage habitat, lowland/upland heath, by controlled grazing |
| MH31 | Manage habitat, lowland/upland heath, by scrub/tree control |
| MH32 | Manage habitat, lowland/upland heath, by mowing |
| MH33 | Manage habitat, lowland/upland heath, by fire prevention /control |
| MH34 | Manage habitat, lowland/upland heath, by enclosure/exclosure |
| MH35 | Manage habitat, lowland/upland heath, by cultivation to accelerate leaching |
| MH37 | Manage habitat, lowland/upland heath, by controlled burning |
| MH39 | Manage habitat, lowland/upland heath, by other activities |
| MH40 | Manage habitat, bog/mire/flush, by water level control |
| MH41 | Manage habitat, bog/mire/flush, by controlled grazing |
| MH42 | Manage habitat, bog/mire/flush, by tree/scrub control |
| MH43 | Manage habitat, bog/mire/flush, by enclosure/exclosure |
| MH44 | Manage habitat, bog/mire/flush, by fire prevention/control |
| MH45 | Manage habitat, bog/mire/flush, by visitor control |
| MH49 | Manage habitat, bog/mire/flush, by other activities |
| MH50 | Manage habitat, swamp/fen/inundation, by water level control |
| MH51 | Manage habitat, swamp/fen/inundation, by planting/seeding |
| MH52 | Manage habitat, swamp/fen/inundation, by scrub control |
| MH53 | Manage habitat, swamp/fen/inundation, by mowing |
| MH54 | Manage habitat, swamp/fen/inundation, by controlled grazing |
| MH55 | Manage habitat, swamp/fen/inundation, by excavation |
| MH57 | Manage habitat, swamp/fen/inundation, by ditch/dyke maintenance |
| MH58 | Manage habitat, swamp/fen/inundation, by controlled burning |
| MH59 | Manage habitat, swamp/fen/inundation, by other activities |
| MH60 | Manage habitat, open water, by water level control |
| MH61 | Manage habitat, open water, by excavation |
| MH62 | Manage habitat, open water, by plant introduction |
| MH63 | Manage habitat, open water, by pollution prevention |
| MH64 | Manage habitat, open water, by clearing/dredging/ re-profiling |
| MH65 | Manage habitat, open water, by clearing surrounding vegetation |
| MH69 | Manage habitat, open water, by other activities |
| MH70 | Manage habitat, coastal, by visitor control |
| MH71 | Manage habitat, coastal, by planting stabilisation |
| MH72 | Manage habitat, coastal, by scrub control |
| MH73 | Manage habitat, coastal, by mowing |
| MH74 | Manage habitat, coastal, by controlled grazing |
| MH76 | Manage habitat, coastal, by enclosure/exclosure |
| MH77 | Manage habitat, coastal, by ditch/dyke maintenance |

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| MH78 | Manage habitat, coastal, by controlled burning |
| MH79 | Manage habitat, coastal, by other activities |
| MH80 | Manage habitat, rock, by soil removal |
| MH81 | Manage habitat, rock, by excavation |
| MH82 | Manage habitat, rock, by cutting vegetation |
| MH83 | Manage habitat, rock, by visitor control |
| MH84 | Manage habitat, rock, by grazing control |
| MH85 | Manage habitat, rock, by scrub control |
| MH86 | Manage habitat, rock, by removal of debris |
| MH89 | Manage habitat, rock, by other activities |
| MH90 | Manage habitat, upland, by controlled grazing |
| MH91 | Manage habitat, upland, by controlled burning |
| MH92 | Manage habitat, upland, by cutting vegetation |
| MH93 | Manage habitat, upland, by enclosure/exclosure |
| MH94 | Manage habitat, upland, by shrub/tree control |
| MH95 | Manage habitat, upland, by visitor control |
| MH99 | Manage habitat, upland, by other activities |
| **MN** | **Manage habitat, marine** |
| MN00 | Manage marine, general, other activities |
| MN01 | Manage marine, general, pollution |
| MN10 | Manage marine, pelagic, general |
| MN20 | Manage marine, benthic littoral, general |
| MN21 | Manage marine, benthic littoral, artificial |
| MN30 | Manage marine, benthic sublittoral, general |
| MN31 | Manage marine, benthic sublittoral, artificial |
| **MA** | **Manage habitat, artificial** |
| MA00 | Manage habitat, artificial, by planting/sowing/ propagating |
| MA01 | Manage habitat, artificial, by mowing/harvesting/selective cutting |
| MA02 | Manage habitat, artificial, by weed control/spraying |
| MA03 | Manage habitat, artificial, by pest control |
| MA04 | Manage habitat, artificial, by felling/cutting /pruning/clearing |
| MA05 | Manage habitat, artificial, by path maintenance |
| MA06 | Manage habitat, artificial, by fertilising |
| MA07 | Manage habitat, artificial, by ploughing |
| MA09 | Manage habitat, artificial, by other activities |
| **MS** | **Manage species** |
| MS00 | Manage species, tree/shrub |
| MS10 | Manage species, other vascular plant |
| MS20 | Manage species, lower plant |
| MS30 | Manage species, mammal |
| MS40 | Manage species, bird |
| MS50 | Manage species, herptile |
| MS60 | Manage species, fish |
| MS70 | Manage species, Lepidoptera |

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|---|---|
| MS80 | Manage species, other insect |
| MS90 | Manage species, other invertebrate |
| **ME** | **Manage estate, fabric** |
| ME00 | Estate fabric, general |
| ME01 | Boundary structures |
| ME02 | Other structures |
| ME03 | Remove structures |
| ME04 | Remove rubbish |
| ME10 | Buildings, general |
| ME11 | Buildings, construct |
| ME12 | Buildings, maintain/improve |
| ME20 | Comply with legal obligations |
| ME21 | Implement emergency procedures |
| ME22 | Trim/fell/clear trees/shrubs |
| ME30 | Control erosion |
| ME31 | Control dumping |
| ME32 | Control extraction |
| ME40 | Provide/maintain paths/rides/roads |
| ME50 | Provide/maintain drainage systems |
| ME60 | Provide/maintain staff accommodation |
| ME61 | Provide/maintain visitor accommodation |
| ME62 | Provide/maintain education facilities |
| ME63 | Provide/maintain medical facilities |
| ME64 | Provide/maintain workshop |
| ME65 | Provide/maintain fuel storage |
| ME66 | Provide/maintain general stores |
| ME67 | Provide/maintain water supply |
| ME68 | Provide/maintain power supply |
| ME69 | Provide/maintain fuel supply |
| ME70 | Provide/maintain religious centre |
| ME71 | Provide/maintain recreational facilities |
| ME72 | Provide/maintain social centre |
| **MG** | **Manage estate, grazing** |
| MG00 | Husband grazing stock, cattle |
| MG10 | Husband grazing stock, sheep |
| MG20 | Husband grazing stock, ponies |
| MG30 | Husband grazing stock, other |
| **MM** | **Manage estate, machinery** |
| MM00 | Acquire/service vehicles/boats |
| MM10 | Acquire/service machinery |
| MM20 | Acquire/maintain tools/equipment |
| MM30 | Acquire/service aircraft |
| **MD** | **Microplan management project codes** |
| MD00 | Improve Agriculture, general |

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|---|---|
| MD01 | Develop/Maintain livestock productivity |
| MD02 | Develop / maintain crop productivity |
| MD03 | Provide / improve / develop livestock welfare facility |
| MD04 | Provide / develop livestock breeding facility |
| MD05 | Provide / improve irrigation facility |
| MD10 | Develop / maintain silvicultural activities, general |
| MD11 | Develop / maintain fuel wood sources |
| MD12 | Develop / maintain timber sources |
| MD13 | Develop / maintain tree fodder sources |
| MD14 | Develop / maintain Agroforestry systems |
| MD15 | Develop / maintain sylvo-pastoral systems |
| MD16 | Develop plant nursery facilities |
| MD17 | Provide tree seedlings |
| MD20 | Soil and Water conservation, general |
| MD21 | Construct soil / water conservation structures |
| MD22 | Plant / maintain trees / other vegetation |
| MD23 | Restore / protect vegetation |
| MD30 | Develop / maintain agricultural infrastructure |
| MD31 | Provide / maintain livestock control structures |
| MD32 | Provide / maintain other agricultural structures |
| MD33 | Provide agricultural support facilities |
| MD34 | Provide / maintain access roads |
| MD35 | Provide / maintain irrigation facilities |
| MD40 | Provide / maintain village infrastructure |
| MD41 | Provide / improve medical facilities |
| MD42 | Provide / improve social / cultural facilities |
| MD43 | Provide alternative energy sources |
| MD44 | Improve efficiency , existing energy sources |
| MD45 | Provide / improve education facilities |
| MD50 | Develop alternative employment |
| **MU** | **Manage underground (speleological interest)** |
| MU00 | Manage underground, control pollution |
| MU01 | Manage underground, restoration |
| MU02 | Manage underground, establish/maintain exclusion areas |
| MU03 | Manage underground, control water movement |
| MU04 | Manage underground, control excavation/digging |
| MU05 | Manage underground, control visitors |
| MU06 | Manage underground, remove debris |
| MU09 | Manage underground, other activities |

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|---|---|
| **A** | **Administration** |
| **AN** | **Site notification** |
| AN00 | Classify site |
| AN10 | Notify site |
| AN20 | Renotify site |
| AN30 | Denotify site |
| AN40 | Register site |
| **AA** | **Site acquisition / declaration** |
| AA00 | Acquire site, by purchase/lease/agreement |
| AA10 | Acquire site, extension, by purchase/lease/agreement |
| AA20 | Augment protection, by e.g. purchase of shooting rights |
| AA30 | Declare site |
| AA40 | De-declare site |
| AA50 | Update information, Estate Terrier |
| **AL** | **Legal, land agency matters and payments.** |
| AL00 | Maintain holding, legal, by e.g. renewing lease/agreement/tenancy |
| AL10 | Safeguard title, legal, by e.g. closing site/road one day per year |
| AL20 | Maintain holding, legal, by making/receiving payments |
| AL30 | Protect site, legal requirements, by convening annual meeting |
| AL40 | Prepare/revise plan, policy & legislation |
| **AP** | **Planning, plan preparation and revision** |
| AP00 | Prepare/revise legal site description |
| AP10 | Prepare/revise work programme |
| AP20 | Prepare/revise plan, management plans |
| AP21 | Prepare/revise plan, strategic planning |
| AP22 | Prepare/revise plan, major projects |
| AP23 | Prepare/revise plan, section plans |
| AP30 | Prepare/revise plan, fire protection/control |
| AP40 | Prepare/revise plan, emergency procedure |
| AP50 | Prepare/revise plan, safety |
| AP60 | Prepare plan, annual work |
| AP70 | Convene meeting, Annual Programme Review |
| AP80 | Convene meeting, Site Management Committee/advisory group |
| **AS** | **Site and species safeguard, law enforcement & admin.** |
| AS00 | Protect site, by promulgating/enforcing laws |
| AS10 | Protect site, by implementing visiting permit system |
| AS20 | Protect site/species, by implementing collecting/research permit system |
| AS30 | Protect site, by preparing evidence |
| AS40 | Protect site, by prosecution, |
| AS50 | Protect species, by prosecution |
| AS60 | Protect species, by control of harvesting |
| **AI** | **Inspections and audits.** |

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|---|---|
| AI00 | Implement inspection, monitoring site integrity |
| AI10 | Implement inspection, site equipment |
| AI20 | Implement inspection, site buildings |
| AI30 | Implement inspection, site safety |
| AI40 | Implement inspection, other |
| **AR** | **Reports and general correspondence** |
| AR00 | Prepare report, project recording |
| AR01 | Prepare report, project review, new projects |
| AR10 | Prepare report, incident, e.g. fire/accident |
| AR20 | Prepare report, annual progress |
| AR30 | Prepare correspondence, general |
| AR40 | Record administrative details, e.g. staff appointments/visits |
| AR60 | Prepare report, other |
| **AF** | **Financial planning and recording** |
| AF00 | Finance, general |
| AF01 | Grant applications |
| AF02 | Fund raising and donations |
| **AT** | **Training and management.** |
| AT00 | Train staff, use of site planning system |
| AT10 | Train staff, management techniques |
| AT20 | Train staff, use of machinery/equipment |
| AT30 | Train staff, other |
| AT40 | Liaise/supervise staff/contractors |
| AT50 | Liaise/supervise voluntary/honorary wardens |
| AT60 | Liaise/supervise voluntary/other working groups |
| **AE** | **Employ staff** |
| AE00 | Employ staff, general |
| AE10 | Employ staff, staff welfare |

# APPENDIX 2 GLOSSARY

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|---|---|
| **Attribute** | Attributes are the characteristics, qualities or properties of a feature which are inherent and inseparable from the feature. If measurable they may be used as a performance indicator to help assess the condition/status of the feature. |
| **Factor** | Factors are anything which have, are or could change a feature. Factors can be: both positive and negative, anthropogenic or natural and can operate both on and off site. |
| **Favourable Conservation status** | Favourable Conservation Status (FCS) is the desired status of a feature habitat or species, over its entire range, within a defined protected area, or at any scale in between. |
| **Feature** | Features provide a focus for management planning. In addition to nature conservation features, habitats and species, sites often contain a range of additional features, including geological, archaeological, cultural and religious features. Other features, or points of focus, for planning include landscape & wilderness values, relationship with stakeholders, access and tourism, and interpretation. |
| **Monitoring** | Making observations with sufficient precision in order to determine whether a required condition is being met. |
| **Operational Limits** | Operational limits define a range of values within which a factor is considered acceptable. |
| **Objective** | Objectives are clear, site-specific descriptions of what we want for each feature. They are portraits, in words, of a feature in the state that we require. |
| **Performance indicator** | Performance indicators provide the evidence that we use to determine whether or not we are meeting our conservation objectives. Performance Indicators encompass both factors with operational limits and attributes with specified limits. |
| **Project** | A discrete piece of work. |
| **Project code** | A 2-letter/2-digit code with standard title, used to describe projects. |
| **Rationale** | The structured process used to identify the work required to meet the objectives. |
| **Specified Limits** | Specified limits define the degree to which the value of an attribute is allowed to fluctuate without creating any cause for concern. |
| **Zone** | A site can be divided into manageable chunks - zones - for ease of management; zones may be based on habitat type, location or management regime, public use or safety. |